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ABSTRACT

This collection of scholarly papers by the members of the New York State Association of Two Year Colleges is designed as a forum for the exchange of experiences and achievements among two-year college professionals in the state. Part I presents the following articles: "Successful English Remediation at the Community College Level," by Barbara C. Fatum; "A Comprehensive Counseling Program at a Junior College," by Eric Willner; "Recall and Intervening Mental Activities Involved in Listening to Expository Information," by Shirley Aaronson; "Textbook Selection with Active and Meaningful Student Participation," by Basil L. Cleare; "Overcoming the Disincentives to Study Abroad," by Stephen Beiner and Sue Commanday; and "Creative Marketing: Student Recruiting Methods Utilized by Two-Year Colleges," by Thomas Duda. Part II contains abstracts of the following dissertations: "An Exploratory Study of the Relationship between Mathematics Anxiety and the Processes Used by Developmental Community College Freshmen to Solve Verbal Mathematics Problems," by Anthony P. Giangrasso; "Responses to Anxiety by College Athletes," by Elizabeth F. Zwart; and "Impact of Selected Academic Curricular Variables on Achievement and Graduation of Open-Admissions Students at an Urban Community College," by Myrna B. Charry. (LAL)

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EDUCATIONAL DIMENSIONS

CONTENTS

Page

President's Message 1

Part I - Articles

Successful English Remediation at the Community College Level - Barbara C. Fatum 2

A Comprehensive Counseling Program at a Junior College - Eric Willner 13

Recall and Intervening Mental Activities Involved in Listening to Expository Information - Shirley Aaronson 17

Textbook Selection with Active and Meaningful Student Participation - Basil L. Cleare 24

Overcoming the Disincentives to Study Abroad - Stephen Beiner and Sue Commanday 31

Creative Marketing: Student Recruiting Methods Utilized by Two-Year Colleges - Thomas Duda 35

Part II - Dissertation Abstracts

An Exploratory Study of the Relationship Between Mathematics Anxiety and the Processes Used by Developmental Community College Freshmen to Solve Verbal Mathematics Problems - Anthony P. Giangrasso 42

Responses to Anxiety by College Athletes - Elizabeth F. Zwart 43

Impact of Selected Academic Curricular Variables on Achievement and Graduation of Open-Admissions Students at an Urban Community College - Myrna B. Charry 44

PRESIDENT'S MESSAGE

It is my pleasure to present to you, in this fourth issue of **EDUCATIONAL DIMENSIONS,** a collection of scholarly papers by the members of the New York State Association of Two Year Colleges. I am pleased to report that our choice of papers to be included in this issue was most difficult due to the number and excellence of the articles we had received. The Editorial Board, under the able direction of our Information Officer, Judith Green, attempted to select those articles concerned with broad appeal to the greatest number of readers.

I wish to thank all those individuals who submitted articles and urge them and all our members to continue their interest in our Association.

I hope you enjoy your reading.

Dolores F. Saxton
President, 1981-1983

PART I

ARTICLES

SUCCESSFUL ENGLISH REMEDIATION AT THE COMMUNITY COLLEGE LEVEL

Barbara Clark Fatum
Schenectady County Community College

This article is written to describe a program in English remediation at the community college level that was implemented in the Spring of 1981 at Schenectady County Community College. The program was developed by Professor Jessie Malheiros and the author. The objectives were to improve the students' vocabulary, to familiarize them with several types of dictionaries, thereby reducing their reluctance to use that reference; and to give them basic research skills utilizing the major resources the library has to offer. This article will describe the program and then summarize the written observations that were kept throughout the semester.

Simple evauation techniques will be used to summarize the results of this program. The sample (n=18) of students completing this program is too small to generalize the results beyond this particular population. Several uncontrolled variables (student illness, variations in instruction technique, some students seeking additional instruction) contribute to difficulty in precise measurement of results. It is hoped, with these cautions explained, that this description of one type of remedial program will aid other community college faculty struggling with the same problems.

It is believed that any remedial program implemented at the two-year-college level must be structured to meet planned objectives in order to effectively help students learn. Program administrators must determine what skills students entering the college need, develop objectives to insure that those skills are taught, provide ample opportunity for students to practice the skills, and measure results to determine if learning has taken place. Assignments and regular quizzes which are graded and reviewed with the student are good opportunities for skill practice.

PROGRAM DESCRIPTION

This program contains three major units: Vocabulary Improvement, Dictionary Skills, and Library Research Skills. Objectives for each unit are contained in Appendix. 2.

Vocabulary Improvement

The Vocabulary Improvement Unit centers around teaching each student seven basic concepts of vocabulary: utilization of context to determine word meaning, syllabication, major and minor stress, word parts, discrimination of correct meaning in the dictionary entry, part of speech, and function of the word in context. Eight class sessions* are devoted to instructing these basic concepts; lab sessions** offer individual and small group help in each area.

Each student is asked to turn in five vocabulary cards per week or a total of about fifty in a semester. Appendix 3 contains instructions for completing a vocabulary card. The class instructor grades each card, correcting any errors. The student is directed to the skills laboratory to receive individualized help in correcting deficiencies. Weekly quizzes are given to motivate students to learn the words on a regular basis. it is important to stress the necessity of regular vocabulary acquisition since students who fall behind do not transfer information from short-term to long-term memory. Most of the students had to be taught this skill. An additional measure of student progress in the program was the results of the Nelson-Denny Reading Test administered at the beginning and end of each semester. There are problems with this measure which will be discussed later in this article, but it should be noted that successful students in this unit also showed a general improvement on the Nelson-Denny Reading Test.

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*Classes are defined as group instruction and meet once per week. Each class contains a maximum of fifteen students.

**Students are required to attend two labs per week in addition to class if they score at the eighth grade level or below on the Nelson-Denny Reading Test at the beginning of the semester.

Dictionary Skills

The Dictionary Skills Unit stresses the acquisition of five major skills. Initially, the instructor and student review the parts of the dictionary entry, ensuring that the student understands how to read it correctly. The instructor then works with five major concepts: utilization of guide words, cross-referencing, diomatic usage, word etymology, and functions of special dictionaries. Exercises from the text for the course* are suitable for teaching these skills. In addition, laboratory instructors create new exercises tailored to individual needs.

The first eight sessions of the course are devoted concurrently to this unit and the vocabulary unit. It was discovered that many students have great difficulty with the vocabulary unit because they do not understand the concepts in the Dictionary Skills Unit. Mastery of concepts in this unit is measured by a test constructed by classroom teachers. Classroom teachers coordinate efforts with laboratory instructors in this unit in an effort to ensure mastery of concepts by each student.

Library Skills

To begin the Library Skills Unit, students receive an orientation lecture and tour of resources from the reference librarians. The lecture has been developed by the librarians to meet students' requests for skills in specific resource areas. Students are instructed in the use of the Card Catalog, the Readers' Guide to Periodical Literature, several foreign language dictionaries, the New York Times Index, and several reference dictionaries. Exercises from the text for the course are utilized to provide experience for the students in each resource. Laboratory sessions and one additional class session are spent in the library completing the exercises. Classroom instructors and the librarians are available to students during these periods and individually. Exercises are then graded and reviewed with the students. Finally, a unit test designed by classroom instructors to measure mastery is given during the last week of classes.

RESULTS

Vocabulary Improvement

All eighteen students successfully completed this unit upon handing in fifty vocabulary cards and completing the required weekly quizzes. (Table 1 of Appendix 1 summarizes the results).

Dictionary Skills

The results of the test administered to check mastery in this unit are contained in Appendix 1, Table 2 and Graph 1. Each student's score is listed (students retain the same score from table to table; scores may be compared) and the number and percentage of students in a specific grade range is shown. A simple bar graph depicts the percentage categories.

Library Skills

The results of the test administered to check mastery in this unit are shown in Table 3 and Graph 2 of Appendix 1. Individual test scores are listed; range of grade is shown by number and percentage in each grade range.

OBSERVATIONS

Working with the Developmental Program in English at Schenectady County Community College for the past four years has left this author with many questions about appropriate technique, curriculum, and structure for this type of program. Conferences attended and discussions with faculty members have led to the conclusion that everyone seems to be "inventing the wheel" in this area. There is a dearth of literature to consult for expert advice as to correct procedure. This void has been the motivating force in offering these observations and experiences in working with one program. Both successes and mistakes will be available to others as a direction in which to proceed.

---

*The textbook chosen for this course is *College Reading Power and Study Skills* by LeFevre and LeFevre.

Vocabulary Improvement

The structure of this unit was very specific. Major concepts were presented in classroom sessions and student understanding was immediately observable on the vocabulary cards and quizzes received each week. This concrete structure is necessary to vocabulary improvement. Student scores evidence a trend in the positive direction in grade-level proficiency. The small, individual net gain can be partially explained by the scores of two students who consistently put little effort into the course and negatively skewed the results. A general comparison of quiz results and Nelson-Denny scores shows that a pattern has been followed: students who showed consistent effort improved; students who did not keep up regressed.

The quantitative results of this unit, however, are rather inconclusive because of the measure used to test mastery. The Nelson-Denny Reading Test is a standardized test and has questionable face validity for this vocabulary unit. A specific vocabulary test should have been developed for each student. Instructors developed specific quizzes, but time factors and school policy dictated use of the Nelson-Denny. The reliability of the Nelson-Denny Reading Test is distorted by factors such as student fatigue, concentration, and motivation. An individual student score can vary as much as one or two grade levels using test-retest methods of administration. Poor reliability explains some of the ambiguous results in Table 1, Appendix 1. For example, student #6 maintained a "B" average on class quizzes but regressed one grade level on the Nelson-Denny Post Test.

Two exciting observations this semester merit discussion here. During the course of the semester, several students demonstrated noticeable improvement in their speaking habits. As they gained knowledge of word usage, they began to apply it to their spoken vocabulary. Secondly, some students were observed transferring knowledge of the meaning of word parts to unfamiliar words. Encountering the word "anthropology" one student observed, "Well, it has to be the study of something." This student demonstrated a higher-order cognitive skill and met a hidden objective of this unit, to encourage students to apply newly gained knowledge to unknown words.

Some problems also merit discussion. Many of the students, unused to the challenge of regular assignments, had difficulty completing five vocabulary cards each week. The instructors remained firm that deadlines must be met on a regular basis, emphasizing that five words must be learned each week in order to meet program objectives. Student complaints were delivered to the department chairman, but the cards were delivered on time! As a result, many students began to evidence better study habits and to carry these habits over to other courses. Another hidden objective of any remedial unit, should be to teach students appropriate college-level behavior. Many remedial students have no idea what is required of them and fail courses because of this lack of knowledge.

A second problem surfaced in the beginning of the course. Periodic surprise quizzes showed that students were not learning the words they were submitting. The curriculum was revised to allow quizzes to be given each week. Regular testing produced more regular learning, and grades for all but two students improved.

A final problem surfaced with the specific skills, "part of speech" and "function." Most of our students lack the grammatical background to correctly complete these parts of the vocabulary cards. Instructors did not have enough time to teach these skills. In future semesters, instruction should begin in these areas.

Dictionary Skills

This unit needs to be structured more carefully in the future. The students had difficulty understanding the major concepts in this unit. This surprised the instructors and, consequently, instruction took much longer than planned. The majority of the students had never analyzed a dictionary entry. Word etymology was difficult to teach because student exposure to Greek and Latin mythology, language or literature was very limited. These concepts need to be included in the beginning of the unit and a pretest should be developed to measure student mastery. Those students who fail to grasp basic concepts would require additional instruction in the skills laboratory.

Another difficulty evidenced itself in the area of cross-referencing. Cross-referencing requires a broad vocabulary; many of our students were unable to acquire an adequate vocabulary in one semester. Students who continue for two or three semesters should gain fluency with synonyms and begin to be able to cross-reference with the aid of a dictionary.

As the reader can see from the graphed results, three students failed completely to grasp the concepts of this unit. Two additional students understood them only minimally. Thirteen students or about 72% completed the unit with an average or better-than-average understanding of the objectives. Again, these results must be attributed to student difficulty with basic concepts and additional individual instruction is recommended for students who require it. Close coordination must exist between the classroom setting and the skills laboratory.

Library Skills

This unit was planned to meet very specific objectives. All students received the same instruction from the reference librarians. Each student then experienced the same follow-up instructional techniques utilizing exercises from the course textbook, extra help from their classroom instructor, resources at the Schenectady County Community College Library, and individual aid from the reference librarians. Instructors felt that this unit provided adequate opportunity for students to practice the concepts they were expected to learn. After assignments were graded, they were again reviewed with students who had not mastered the required material. The skills laboratory provides a successful student learning experience when coordinated in this manner with classroom instruction.

One interesting instructional problem was encountered in this unit. It became necessary to supply the reference librarians with some simple remedial instruction techniques. The pace of instruction in this unit had to be slowed, ample time for questions had to be included, and concrete demonstration of each skill had to be provided in order to allow students to master the concepts. Once these changes were instituted, instruction proceeded smoothly. The librarians commented that they enjoyed the change of pace and the in-depth interaction with the students.

All students completed the mastery test constructed for this unit. The results indicate that about 77% of the students achieved mastery in most of the objectives. Only one student was unable to master any of the concepts. Comparison with the other two units indicates student understanding and mastery to be the highest in the Library Skills Unit.

SUMMARY

Results of this program support the original hypothesis that remedial instruction at the community college level must be structured to meet planned objectives. Instruction that is individualized, but haphazard and unorganized, only results in further confusion for a student who has experienced enough confusion and failure in education. Remedial students need to master skills that can be applied to other courses in their college experience. They must also comprehend that skills they acquire are useful to them and can be transferred to other areas of their lives.

Instruction in a remedial program works best when the student experiences two types of student-teacher interaction. The small-group classroom situation utilized in this program mirrors the structure of other college classes and provides the best setting for the presentation of major concepts to be learned in the program. This structure may help minimize any remedial stigma attached to the program; the student can talk to friends about attending classes. Classroom instruction also encourages peer interaction, insures consistent instruction for all students, and subtly teaches the student appropriate college classroom behavior. Classroom instruction should be closely coordinated with individual instruction in a skills laboratory. Laboratory instructors should aid students in completing classroom assignments and provide additional instruction designed to teach concepts presented in the classroom. This author is convinced that the remedial student masters concepts only with consistency of instruction, close teacher-student interaction, ample opportunity to practice concepts to be learned, and reliable and valid testing to measure mastery.

APPENDIX 1

Results of Vocabulary
Improvement Unit

Student	Quiz Average	Nelson-Denny Pretest	Nelson-Denny Post Test	Net Results
1	D	7.5	7.2	- .3
2	C	9.7	11.0	+ 1.3
3	B	12.8	12.3	- .5
4	F	-7	-7	0
5	B	11.3	11.3	0
6	B	9.2	8.2	+ 1
7	B	10.2	11.0	+ .8
8	F	7.0	7.5	+ .5
9	C	7.5	7.5	0
10	A-	8.1	10.5	+ 2.4
11	C-	7.0	7.0	0
12	D	7.0	7.0	0
13	C	11.0	10.0	- 1
14	C-	7.2	9.0	+ 1.8
15	C	9.7	9.0	- .7
16	F	-7	-7	0
17	C	10.2	10.5	+ .3
18	C	7.2	7.0	- .2

Class Loss= 3.7 grade levels

Class Gain= 7.1 grade levels
+3.4 net gain
.19 gain per student

Table # 1

Results of Dictionary

Improvement Unit

Student	Dictionary Test Score	Student	Dictionary Test Score
1	25	10	80
2	90	11	10
3	78	12	90
4	30	13	90
5	85	14	75
6	75	15	80
7	85	16	80
8	63	17	83
9	50	18	90

SUMMARY: Students and Percentage of Students in each Grade Range are Included in the Chart Below.

Grade Range	#Students in Range	Percentage in Range
90-100	4	22%
80- 90	6	33%
70- 80	3	17%
60- 70	1	5%
50- 60	1	5%
- 50	3	17%

Table # 2

Results of Library

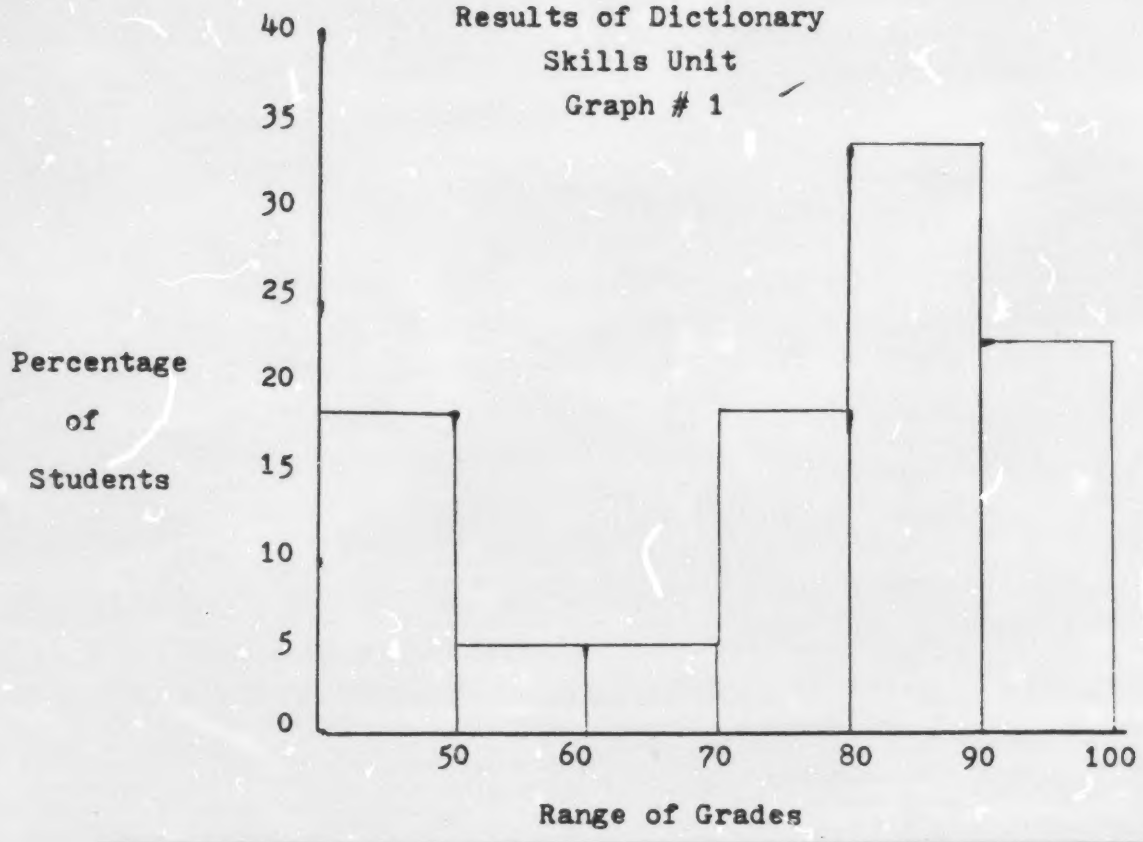
Skills Unit

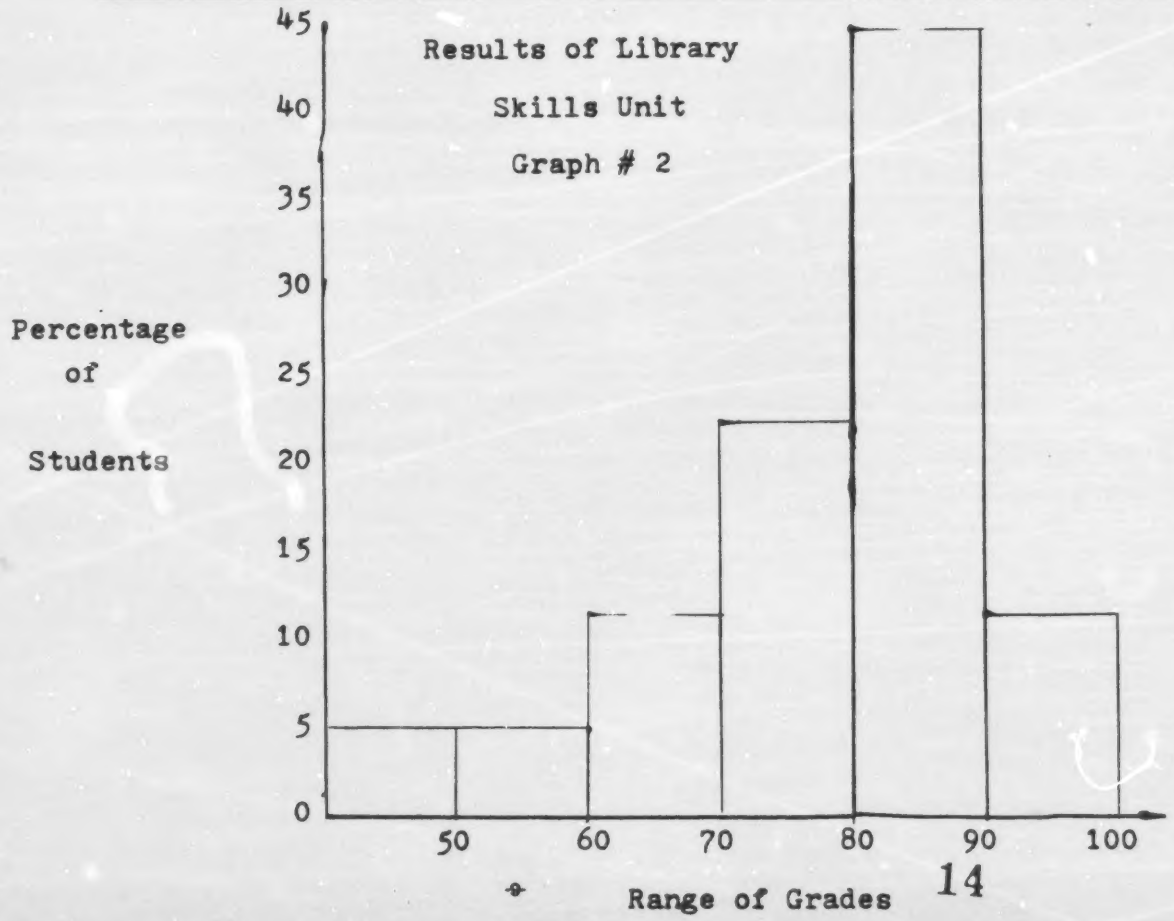
Student	Library Skills Test Score	Student	Library Skills Test Score
1	88	10	82
2	85	11	58
3	94	12	81
4	44	13	70
5	65	14	65
6	78	15	74
7	83	16	94
8	80	17	84
9	82	18	75

SUMMARY: Students and Percentage of Students in each Grade Range are Included in the Chart Below.

Grade Range	#Students in Range	Percentage in Range
90-100	2	11%
80- 90	8	44%
70- 80	4	22%
60- 70	2	11%
50- 60	1	5%
- 50	1	5%

Table # 3


Results of Dictionary
Skills Unit
Graph # 1
Percentage
of
Students
40
35
30
25
20
15
10
5
0
50
60
70
80
90
100
Range of Grades


Results of Library
Skills Unit
Graph # 2
Percentage
of
Students
45
40
35
30
25
20
15
10
5
0
50
60
70
80
90
100
Range of Grades

APPENDIX 2

OBJECTIVES FOR ENGLISH REMEDIATION

Vocabulary Improvement Unit

At the end of fifteen weeks each student will demonstrate the following skills:

1. The student will learn fifty new words and demonstrate ability to apply them to his/her speaking, writing, and reading vocabulary.

2. The student will be able to divide each word into syllables.

3. The student will choose the correct meaning from the dictionary entry for any of the fifty words in any given context.

4. The student will be able to name the prefix, root, and suffix for each word.

5. Utilizing a given context and the dictionary entry, the student will choose the correct part of speech for the word in that context.

6. Utilizing a given context and the dictionary entry, the student will name the function (subject, object of preposition, etc.) the word plays in that context.

Dictionary Skills Unit

At the end of fifteen weeks each student will demonstrate the following skills:

1. Utilizing a dictionary entry of an unfamiliar word, the student will pronounce the word, divide it into syllables, name the parts of speech the word may illustrate, choose an appropriate meaning for several different contexts, and explain the derivation of the word form from its origin.

2. Utilizing the guide words, the student will be able to locate the page in the dictionary which contains a given word.

3. Utilizing a dictionary entry, the student will be able to name synonyms for a given word.

4. Utilizing a dictionary entry, the student will be able to differentiate an idiomatic meaning from other meanings contained in the entry.

5. The student will recognize standard Greek and Latin roots, prefixes, and suffixes when they appear in an unfamiliar word.

6. The student will be able to explain the use of a standard thesaurus and the Oxford English Dictionary.

Library Skills Unit

At the end of fifteen weeks, the student will demonstrate the following skills:

1. Utilizing the Card Catalog, the student will be able to complete the skills listed below.
   a. Given the title of a book, the student will find the call number of the book and locate the book in the library.
   b. Given the author of a book, the student will find the call number of the book and locate the book in the library.
   c. Given specific subject matter, the student will locate one book about that subject in the library.

2. Given a topic to research, the student will be able to locate five magazine articles from the *Reader's Guide to Periodical Literature.*

3. Utilizing the foreign language dictionaries contained in the library, the student will demonstrate the ability to locate the entry and explain the origin of a given word.

4. Given an event and the year that event occurred, the student will be able to locate the *New York Times* published containing stories about that event.

5. The student will be able to locate the reference dictionaries contained in the library and explain their function.

APPENDIX 3

INSTRUCTIONS FOR COMPLETION OF VOCABULARY CARDS

Each student will complete five vocabulary cards containing unfamiliar words to be added to the student's vocabulary and turn those five cards into his/her classroom instructor every *Monday*. A brief quiz, based on those words, will be given the following *Monday*. Corrected copies of the cards will be returned to the student prior to each quiz. Students should visit the Skills Laboratory to obtain additional help in completion of the cards or for explanation of corrections to completed cards.

The choice of words to be learned is to be left to the student with two cautions. Each word should be *college-level* and *useful* to the student. Words which do not meet these criteria will not be accepted by the instructor. It is recommended that the words be taken from textbooks the student is currently using in order to improve comprehension of that required reading.

Cards should be completed in the following manner: (A completed vocabulary card is included as an illustration of proper format).

CARD FRONT

1. Student Name: The student's name should be placed in the upper left corner of the card.

2. Source & Page: The classroom instructor may need to locate the word on a given card. To make this possible, place the title of the textbook containing the word in the upper right corner of the card. Include the page the word is located on.

3. Word: Write the word to be learned.

4. Context: Copy the sentence that contains the word from the textbook onto the card. Underline the word.

5. Syllabication: Using the dictionary, divide the word into syllables and place the accent over the proper syllable.

CARD BACK

1. Prefix: Using the dictionary, the student should write the prefix of the word. If the word contains no prefix, write "none." Explain the meaning of the prefix in the space to the right.

2. Root: Using the dictionary, the student should write the root of the word. In the space to the right, explain the meaning of the root.

3. Suffix: Using the dictionary, the student should write the suffix of the word. If the word contains no suffix, write "none." Explain the meaning of the suffix in the space to the right.

4. Meaning in Context: The student should choose the appropriate meaning of the word as it is used in the sentence from the textbook. Consult the dictionary entry in making a choice.

5. Part of Speech: The student should name the part of speech that the word illustrates in that same sentence.

6. Function: The student should name the function of the word as it is used in that sentence.

CARD FRONT

Student Name: John Wright

Source & Page: Introduction to Data Processing, pg. 14.

Word: unique

Context: No machine can ever replace man's unique ability to temper fact with reason and intuition, or to think and to feel.

Syllabication:

u - nique

CARD BACK

Prefix: none — Meaning:

Root: unicus — Meaning: one

Suffix: none — Meaning:

Meaning in Context: unmatched, without an equal

Part of Speech: adjective

Function: modifies "ability"

A COMPREHENSIVE COUNSELING PROGRAM AT A JUNIOR COLLEGE

Eric Willner
Kingsborough Community College

Contemporary educational theory places primary focus upon the student as the center of all educational endeavor. This focus takes on added importance when we view the role of higher education in the light of the open door policy which has introduced to the college a population of students heretofore considered at best "not likely to succeed." The pre "Open Admissions" applicant was required to present evidence of specific standards of scholastic ability and achievement (high school average and SAT scores) in order to gain admission to the college and to a specific curriculum. Although many of these students required some form of educational, vocational, and personal counseling to assist them in clarifying and achieving their objectives, the influx of less well prepared students mandated a re-orientation of goals and techniques to meet the newly emerging and unique needs of this changing college population. On most college campuses, particularly at the two year college level, departments of Student Development which had always carried the major burden of meeting student needs, gradually expanded and re-organized to successfully meet the new challenge (see references). These departments are now organized and staffed to handle a complexity of interrelated financial, academic, vocational, social, personal and emotional problems in an attempt to enhance optimum growth on the part of students, and to encourage retention.

Meeting the Newly Emerging Challenge

In response to the challenge presented by the quantity and quality of the emerging community college population, Kingsborough Community College of the City University of New York developed, over a period of years, a comprehensive and ongoing program of academic orientation and counseling, designed to meet the needs of students from the time of admission, until transfer to a senior college or job placement. This program represents, to a great extent, an expansion and elaboration of services offered during the earlier years of the colleges's history. From its very inception, the college experimented with a variety of orientation programs for incoming freshmen in an attempt to acclimate the neophyte to the academic life of KCC. The programs included, at different times, visits to local high schools, mass programs at which the president and faculty were introduced, and smaller group orientation programs conducted by admissions counselors, a registrar, a faculty member, and student representatives. During the course of the academic year, students were invited to see a counselor for assistance whenever necessary, but apparently, only a percentage of those who could benefit from this service utilized it.

In its current stage of development, the vast majority of students are involved in some phase of the counseling or advisement process, during their stay at the college. The process begins with a Freshmen Orientation Program, prior to the commencement of the student's first semester, and ends on the day the student formally graduates or withdraws from the college. During the first semester, incoming freshmen are assigned to Student Development classes (1 credit) led by a professional counselor-instructor, to whom the students are permanently assigned for individual counseling. The Freshmen Orientation Program, which includes a guided tour of the campus with peer advisers, serves as an introduction to this course. The classroom sessions deal with an explanation of academic processes and procedures, and the improvement of motivational, study, test-taking, decision making, and inter-personal skills. This systematic and early exposure of incoming students to their counselors - in a group setting - enables them to resolve some of the perplexities often associated with the undertaking of a novel experience, discuss difficulties encountered, share and tackle common problems, and solicit individual counseling support as the need arises.

Counseling and Academic Advisement

In addition to being assigned to a professional counselor, students are also assigned to a member of the instructional faculty who serves as their academic adviser during the pre-registration process. In considering the needs of students related to program planning from semester to semester, it is essential that a clear distinction be drawn between the process of academic advisement and that of educational and vocational counseling. Students who enter college with a defined and appropriate vocational objective (many of the A.A.S., A.S. and some A.A. degree candidates) should benefit from academic advisement by a member of the faculty in the

chosen discipline. The advisement of such students involves a thorough knowledge of college procedures, academic requirements for the associate, bachelor's and graduate degrees in the appropriate curriculum, and professional opportunities for people with such degrees. The faculty members in the appropriate disciplines with the greatest expertise in the above areas are best suited to provide this advisement to students.

Most Liberal Arts students, however, do not enter college with a defined educational or vocational objective. In fact, "liberal arts" is conceived by most high school graduates as a program for students with undefined career goals. Furthermore, some A.A.S. and A.S. degree students are in programs selected on the basis of faulty, unrealistic or inappropriate vocational, curricular, or self perceptions. Students in both of the above categories need to be assisted in achieving a realistic perception of themselves, clarifying their interests, academic strengths and weaknesses, understanding the "world of work," identifying work-related skills, assessing employment opportunities and outlook, and relating the emerging insight and information to the various academic options at the college. The tasks described are developmental, and may involve testing, referral to other on-campus or off-campus resources, ongoing counseling sessions and continuous assessment and reassessment. It is obvious that planning the academic program for such students from semester to semester cannot be divorced from the ongoing developmental task to be performed by a professional counselor with expertise in the above skills. Once an appropriate academic goal has been defined, students are then referred to the appropriate discipline for academic advisement.

The Comprehensive Counseling Program and its Objectives

The comprehensive counseling program offered by the college's Department of Student Development is geared, as its name implies, to promote optimal development - academic and personal - on the part of each student. To achieve this goal, all resources of the college are mobilized as the need arises. Students are referred to the college's remedial and supportive workshops, tutorial services, health services, financial aid services, and off-campus social agencies. The Office of Student Life within the department encourages student government and offers a variety of clubs, social, athletic, and recreational activities to enhance personal growth and development. The broad objectives of this comprehensive program, and some of the steps in this process are outlined below:

OBJECTIVE 1: College Orientation - To help individual students to adjust to the college environment and to understand the college's academic program.

1. Explain college curricula, rules, regulations, and procedures.
2. Promote personal-social adjustment to college life.
3. Outline degree requirements.
4. Discuss environmental variables influencing study efficiency.

OBJECTIVE 2: Academic Adjustment - To provide individual students with academic survival information and to help them understand their potential academic problems.

1. Survey common academic problems encountered by freshmen.
2. Advise on effective time management procedures.
3. Report available remedial, supportive, and other assistance resources.
4. Interpret results of standardized ability, achievement, and study skills tests.
5. Survey current study behavior attitudes, and scholastic motivation.
6. Plan appropriate corrective measures for identified academic, behavioral, attitudinal and motivational weaknesses.

OBJECTIVE 3: Study Skills Instructions - To help individual students overcome their specific weaknesses and develop an efficient study program.

1. Teach effective methods for reading textbooks.
2. Teach effective methods for listening and taking lecture notes.
3. Teach effective methods for writing themes and reports.
4. Teach effective methods for preparing for and passing examinations.
5. Teach time budgeting techniques.

OBJECTIVE 4: Educational and Vocational Planning - To help individual students clarify their educational and vocational goals in the light of their aptitude and interests and to provide them with appropriate academic and occupational information.

1. Interpret results of aptitude and interest tests.
2. Review past academic aspirations, achievement and hobbies.
3. Survey one's occupational potentialities.
4. Survey characteristics of the world of work and current occupational opportunities.
5. Relate personal interests, aptitudes and attitudes to the world of work.
6. Provide academic information and assist with educational and vocational planning.
7. Provide information and counseling with regard to college transfer.

OBJECTIVE 5: Personal-Emotional Development - To promote maximal personal development on the part of each student. This step is really an ongoing process to be woven into the large and small group counseling sessions and to be pursued on an individual counseling basis with each student as the need arises.

1. Assist in relating to members of the faculty.
2. Assist in relating to other students.
3. Assist in developing assertive behavior.
4. Assist in dealing with frustration and anxiety.
5. Assist in assuming responsibility for ones behavior.

OBJECTIVE 6: Contact With Instructional Faculty - To maintain an ongoing contact with other members of the faculty for mutual feedback on students' progress and problems.

1. Handle academic problems.
2. Handle attendance problems.
3. Deal with social-emotional problems.
4. Deal with personal-financial problems.
5. Refer to tutorial, remedial, clinical, or other resources.

Looking Ahead

In the process of adjusting to the rapid changes of the community college student population, Kingsborough has developed and utilized a variety of supportive and counseling services, modalities, and techniques. The college is undergoing a continuous process of evaluating the effectiveness of its programs and adapting them when necessary. Recent studies have shown that the Student Development class sessions have met with a measure of success and have served to reduce attrition figures. It is hoped that all colleges will share their more fruitful experiences through the various publications media, and will mutually benefit from each others' successes.

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RECALL AND INTERVENING MENTAL ACTIVITIES INVOLVED IN LISTENING TO EXPOSITORY INFORMATION

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Listening is primary in the hierarchical and developmental system of language interdependence. The other language faculties - reading, speaking, and writing are predicated on the ability to hear and comprehend the flow of language. Because of its crucial nature, Lundsteen (1971) suggested that "listening is the opening key to the educational box."

Despite the importance of listening, the early supremacy of listening performance is not maintained as students progress up the educational ladder. The downward course of listening performance appears to be confirmed by findings from developmental and comparative studies. Sticht and others (1974) reviewed forty-four studies which showed that listening performance was greatly superior to reading during the first three grades of schooling; at the seventh and eighth grade levels, listening and reading performance were comparable; but at the college level, reading showed a superiority to listening in close to half of the comparisons.

Listening occupies a substantial part of the educational day, particularly at the secondary level. According to Duker (1969), it has been estimated that students at the secondary level spend 66 percent of their time in listening to teachers. At the college level, the proportion of time spent in listening is probably higher because the lecture format is still the major mode of instruction. Despite its importance, the skill of listening to expository information seems presumed rather than ascertained by most instructors.

Although there is an extensive body of research related to listening, it has been criticized as being meaningless and superficial (Russel, 1964). A major contributing factor to the lack of meaningful research in listening has been its multifaceted and complex nature. Miller (1951), Brown (1954), and Neisser (1967) were the major theoreticians who expanded our knowledge by opening the once dark continent of listening to further exploration. However, there are many undiscovered areas, including: (1) the relation of culture and language to listening; (2) the subtle and intricate interrelationship among mental processes - imaging, verbal thinking, and mind wandering - as they occur simultaneously with listening; and (3) the dynamics of conceptual acquisition and linguistic competence in relation to listening ability.

Listening because of its impermanence depends heavily on the functioning of memory in contrast to reading. Unless a permanent impression is made of the spoken message, the original form is stored only for the brief time necessary for comprehension to occur. One of the windows into the nature of listening comprehension is the study of written discourse which is generated by free recall. Discourse analysis is particularly important because it provides important information regarding cognitive functioning including recognition of the hierarchical structure of ideas, inferential ability, and tendency towards elaborative behavior.

During the listening act, the mind is using various cognitive tools to aid in storage and retention. One very important tool is imagery which is now being resurrected as a legitimate field of inquiry. The resurgence of interest in imagery was fostered by Bruner (1964) and Piaget and Inhelder (1971) who postulated that image formation occurred before the development of abstract or symbolic functioning and was an important cognitive stage of representation. Paivio (1971), who made an impressive theoretical contribution to the role of imagery and learning, hypothesized that there are two basic and alternative ways of representing information in memory - the verbal and the imaginal which overlap and interact. He also hypothesized that memory increases directly with the number of alternative codes available for retention. Imagery has been used as a variable in discourse recall performance in a number of studies with positive results (Anderson and Hidde, 1971; Johnson, 1974). Steingart and Glock (1979) found that the use of imagery facilitated comprehension and helped generate the production of inferences significantly.

More and more researchers have come to question the validity of using classical experimental models in attempting to understand the linguistic cognitive process (Bloom and Broder, 1950; Deese. 1969). Because listening is a private, interior process which utilizes linguistic and experiential cues to process what is heard, a case study approach was chosen in an attempt to discover what the mind is doing while engaged in listening to a lecture.

DESIGN

This exploratory, descriptive study focused on the dynamics of listening as a cognitive activity and had four purposes: (1) to describe the exact recall of students who had been listening to the beginning portion of a lecture

and were tested immediately thereafter; (2) to determine the accuracy of unaided recall in long term memory (LTM); (3) to ascertain the gain in aided recall; and (4) to analyze and categorize the intervening mental processes occurring simultaneously with listening to the same lecture.

SUBJECTS

The subjects were fifteen paid volunteers attending Queensborough Community College which is a unit of City University of New York (CUNY). Participants were chosen to reflect the wide spectrum of students in attendance including "late bloomers," career-seekers, members of minority groups, as well as the academically unprepared who constitute 50 percent of the population. Criteria for acceptance into the study included a demonstrated ability to verbalize about mental processes during a preliminary screening, and the completion or near-completion of a course in psychology.

INSTRUMENTS AND DESCRIPTION OF THE TESTING ROOM

A taped lecture on the subject of conditioning was the chief instrument employed. Only the first fourteen minutes were utilized consisting of approximately 3,000 words.

The instruments which were used to measure the various aspects of recall and intervening mental activities were the following: (1) The accuracy of immediate exact recall in short term memory (STM) was ascertained by using a variation of Cloze called Op-In which was introduced by Pehrsson and reported by Robinson (1978), with deletions occurring after every one and one-half sentences and adapted to a listening experience. (2) The accuracy of unaided recall in LTM was quickly determined by analyzing written recalls using an easy-to-score check list of responses. (3) A test of cue questions was designed to help subjects recall additional information which was stored but not freely recalled. (4) A flash-button device was in operation to allow subjects to signal the manifestation of intervening mental activity occurring in juxtaposition to ideas received during the lecture.

The testing room was an enclosed partition measuring ten by eleven feet. The furnishings consisted of a very large desk and two chairs and the windows were covered to block out visual distractions. The special signalling and flashing equipment (two separate pieces) were placed for easy accessibility. Thus, the "signal-push" button was placed within the reach of the subject who was seated flanking the left side of the desk, and the "flash mechanism" was placed in the semi-open right hand drawer of the desk so as to be out of view of the subject.

PROCEDURE

Testing was established as a two stage process. The first stage was set up as a trial run in order to determine the suitability of subjects for learning to integrate the separate tasks of listening and signalling followed by retrospection. The second stage consisted of the actual test situation using the target message in the following order: (1) Subjects were first exposed to the Listening Op-In test using the first four minutes of the lecture. (2) Subjects then heard the main portion of the lecture lasting 10 minutes. They were reminded that the investigator would be monitoring the appearance of flash signals which would then be mapped onto a verbatim copy of the lecture. (3) At the conclusion of the lecture, subjects were asked to recall. the directions specified:

> "Imagine that your class-mate was absent from a very important lecture that you attended. *Write down* all you can remember of the main ideas as completely as possible so that you could be of help."

(4) After the completion of the recall protocol, the investigator encouraged each subject to take a brief respite in order to give the investigator time to analyze the recall protocol for areas of omission and gaps in recall. (5) In order to trigger the retrieval of stored ideas not freely produced, subjects were asked open-ended questions based on specific gaps in their recall protocols. (6) Subjects were asked to retrospect about their intervening thoughts. Specific questions were generated from an examination of the investigator's mapped copy of the lecture and were directed towards uncovering the associational stimuli and rationale for attentional departures at that particular context in time. Retrospection was generated by such questions as, "You pressed the push-button at about this sequence in the lecture. What were your thoughts at that time?" Responses were then recorded for immediate analytic purposes.

SCORING

The target message was segmented into thirds in order to see the effect of beginning (primacy), ending (recency), and middle units of information on immediate, unaided, and aided recall. In this study, the term STM was used to describe the immediate retrieval of information for the brief amount of time utilized in the Listening Op-In test (first four minutes of the lecture). Correspondingly, the term LTM, was used to describe the retrieval of information in unaided and aided recall relating to the total lecture.

Scoring procedures consisted of the following: (1) Responses to the Listening Op-In test were scored for accuracy of exact recall. In addition, calculations were made of the percentage of exact and semantic transformations (meaning equivalents). (2) The level of unaided recall was determined by an analysis of the recall protocol which was matched against the text model. The text model was an easy-to-score check list of responses which was designed to incorporate the full range of potential responses which would be generated if total recall were possible. The reliability of scoring was established at 89.9 percent with a 95 percent level of confidence using two judges. Written responses were scored on two levels: major and subordinate ideas (based on an analysis of the text). Major ideas were each given a weight of five points for a total of twenty-seven, and subordinate ideas were each given a weight of one, for a total of 137 idea units in order to obtain a composite score. The range, distribution, and serial position of responses were computed for each subject.

The recall protocol also included non-quantifiable responses called elaborations which could not be scored because they were idiosyncratic. These responses included logical extensions and additions which were the importation of novel facts or ideas which could be correct or incorrect. (3) Responses which were given to probe questions were computed in the same way as on unaided recall in order to guage the percent gain in information. (4) Retrospective comments about intervening mental processes were recorded verbatim and then analyzed and categorized according to a post hoc schema. Behaviors which enhanced recall were considered to be facilitating and those which disrupted recall were considered to be disruptive.

FINDINGS

Exact Recall in STM

Exact memory in STM disappeared very quickly to be replaced by semantic transformations or meaning equivalents. The mean percent of exact recall was 22 percent of the information. However, there were strong primacy effects, followed by recency, with the middle units being reproduced weakly. In fact, the largest number of semantic transformations were produced in the middle region where forgetting was the greatest. Using a Spearman Rank Correlation Coefficient, it was found that the ability to reproduce words verbatim was not correlated with the ability to recall a lecture (.21).

Unaided Recall in LTM

The mean percentage of unaided recall in LTM was 28 percent for the fifteen subjects; the range was 15 to 50 percent. This result compared favorably with other researchers; Meyer and McConkie (1973) and Marshall and Glock (1978-79) obtained 23 and 24 percent respectively. In order to determine if there was a correlation between the recall of concepts (major ideas alone) and rank on unaided recall (composite score of major and subordinate ideas) a Spearman Rank Coefficient Correlation was computed. Table 1 ranks each subject according to (1) composite score obtained on major ideas and subordinate details, and (2) major ideas alone. According to the results, there was a significant correlation (.91) $p. < .01$ indicating that there was a strong relationship between the recognition of the hierarchy of ideas and recall.

TABLE 1

Unaided Recall: Composite Score of Major and Subordinate Ideas and Major Ideas Alone

Subject	Rank	Score of Major and Subordinate Ideas	Rank	% of Major Ideas (27)
Leslie	1	50	1	22
Andy	2	48	4	19
Donald	3	38	2	22
Tom	4	37	3	22
Olga	5	34	5	15
Sally	6	32	6	15
Betty	7	25	9	11
Bob	8	24	8	13
Edna	9	23	10	11
Cindy	10	22	11	11
Cathy	11	20	13	7
Dorothy	12	19	7	15
Lenny	13	18	12	11
Ira	14	16	14	9
Roberta	15	16	15	4
		$\bar{x}$ = 28%		$\bar{x}$ = 14%

$r = .91$

$p < .01$

Serial Order

The mean accuracy of response in serial order was differentiated according to the order of presentation; thus, 57 percent of the responses were reported in the beginning part of the lecture (primacy), 25 percent in the middle, and 37 percent in the last part of the lecture (recency). There was a general tendency for the beginning part of the lecture to be remembered sequentially, for the middle part to be remembered much less frequently and often out of order, and the end to be remembered as a composite but jumbled unit.

Aided Recall

The use of probe questions resulted in a mean gain of 16 percent with a range of from 9 to 30 percent. There was much individual variation depending on the strength or weakness on unaided recall which determined the amount of information available for later retrieval.

Elaborations

The mechanics of recall were not simply reproductive. There was much individual variation in elaborative behavior depending on the subject and the degree of interaction affected by such aspects as prior experience, interest, and familiarity with the subject. Many of the recalls evidenced importations, distortions, simplifications, and inferential activity.

Intervening Mental Activities

Through retrospection the following behaviors were found to predominate and to have either a facilitating or interfering effect on retention: (1) imagery, reported one-third of the time, was largely facilitating; and (2) mind wandering, manifested one-fifth of the time, was mainly deleterious. The other less frequent behaviors were (a) recalling information, (b) flash association, (c) personalizing, (d) processing difficulties, and (e) anticipation.

TABLE 2

Intervening Activities and their Effect on Recall
(Unaided and Aided)

Activity	Total Frequency Total	Total % of Total (105)	Facilitating Frequency	Facilitating %	Interfering Frequency	Interfering %
Imagery	32	31	28	88	4	12
Mind Wandering	22	21	3	14	19	86
Recalling	12	11	10	83	2	17
"other"	10	10	2	20	8	80
Flash Association	8	8	4	50	4	50
Processing Difficulties	8	8	3	37	5	63
Personalizing	8	8	6	75	2	25
Anticipating	3	2	2	—	1	—
Extending	2	1	1	--	1	--
Total	105		59		46	

The mean frequency of the appearance of intervening mental activity was five for the ten minute listening experience; thus, the occurrence of mental activity was relatively frequent, depending on a variety of interactive factors.

Retrospection and Imagery

Although most subjects experienced imagery in this present study to a greater or lesser extent, some were more hesitant or reluctant about communicating the nature of the thought processes which had occurred. Horowitz (1970) reported on the difficulties of obtaining unbiased, unedited reports of imaging because of the tremendous susceptibility of subjects to suggestions. In addition, because imaging is a private experience, it is affected by individual idiosyncrasy. Consequently, there is the problem of over-reporting (false-positive) and under-reporting (false-negative) which was not always successfully resolved in the present investigation. Specifically, in the initial stages of the study, leads suggested by subjects were not always followed-up and thus were probably under-reported. Under direct questioning the highest ranking subject reported that she imaged throughout the lecture but suppressed reporting the information because she assumed that it was inappropriate. Despite strong attempts to control for suggestion, reports on the incidence of imagery increased, after the investigator became aware of its importance as an aid to recall.

CONCLUSIONS

1. There is no simple answer to the question, "What is the mind doing while listening to a lecture?" The mind is not reacting passively while being exposed to a stream of information. Rather, the mind is engaged in a compex range of activities while listening, involving on the one hand, an active reconstruction of a message before it desappears. On the other hand, the mind is also beset by intervening mental activities which enhance or detract from the depth of processing which is occurring. Since listening is not simply a reproductive experience, some of the interactive factors are schema, prior experience, motivation, cognition, level of interest, and emotional factors.

2. The ability to comprehend and recall is complicated by the fragility of exact memory. However, it is not the ability to reproduce exactly heard information which determines the level of comprehension and recall, but rather the ability to reconstruct the message into a semantic counterpart before it disappears, which is crucial. In addition, the level of recall is positively related to the ability to grasp the structure or hierarchy of concepts which then serve as a triggering mechanism or anchoring force in helping to store and release information clustered about different themes.

3. The mechanics of recall were not simply reproductive. Because there was a high degree of interactive activity between listener and the information, affected by such aspects as prior experience, interest, and familiarity with the subject, elaborative behavior was evidenced by all subjects to a greater or lesser degree.

4. In general, the mind faces a losing battle in an effort to recapture and reconstruct what is heard. These community college students were able to recall about one-fourth of the information. With assistance, they were able to recall an additional one-sixth.

5. As revealed during retrospection, because of the speed of thought and fluctuating levels of attention, the mind functions like a three-ring circus in attempts to process, store, and retrieve the flow of information. In addition to conceptualizing, some of the intervening activities include: associating, anticipating, extending, imaging, recalling, personalizing, mind wandering, and processing what is heard. Imagery appears to be a frequent dynamic of thought, and when used appropriately, is probably an important tool in cognition and recall. Conversely, mind wandering, seems to be a temporary disrupter of thought because of the effect on the processing of the information, and occurs in response to the nature of the information being heard.

IMPLICATIONS

1. Since the mind faces a losing battle in recapturing what is heard because of influences such as fluctuating attention, difficulties in concentration, inadequate conceptual frame, effects of serial order proactive and retroactive interference, and linguistic factors, it is important for educators to become aware of the complex nature of information processing and to adjust their lecture methods accordingly. Some recommended specific procedural techniques are the following: (1) using varied audio-visual stylistic approaches to help maintain attention; (2) providing alternative methods of encoding and storing information by the use of such devices as the structural over-view and tree diagrams; (3) improving the reception of language by improving the verbal style of delivery, preferably by the use of vivid and concrete terms insofar as possible; (4) enhancing the conceptual base by the use of advance of post organizers, and encouraging pre-readings; (5) recognizing the effect of serial order, particularly the loss of middle units of information, therefore it is recommended that the high points of the lecture be placed toward the beginning or at the end; and (6) enhancing the process of retention by encouraging the use of verbal mediators such as suggesting that students list or outline briefly the main points of the lecture at the very end, before leaving for the next class.

2. Recognition should be given to the varieties of interactive intervening behaviors and their effect on retention which can appear during the course of a listening experience. Thus, those behaviors which facilitate cognition and recall such as imaging, associating, extending, recalling, etc. should be maximized by the kinds of language and specific examples which are used during the course of a lecture. Conversely, attempts should be made to lessen the impact of intervening behaviors which interfere with the reception of a lecture by avoiding formats which allow for passivity or encourage daydreaming on the part of the listening audience. Students must be kept on their toes by the unexpected question, the unusual use of rhetoric, the unpredictable intellectual challenge, and the avoidance of rigidity. In addition, it is important for educators to reexamine their attitudes towards the manifestation of imagery since it has been demonstrated to be a helpful tool in cognition and recall.

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TEXTBOOK SELECTION WITH ACTIVE AND MEANINGFUL STUDENT PARTICIPATION

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The major motive behind any textbook selection process is to isolate a textbook which properly serves the needs of the instructor, the student and the department. Because of its importance to these three beneficiaries, many departments have elaborate arrangements for determining a 'winner.' However, despite the elaborate arrangements of these book selection devices, which may be an entire book selection committee or a sub-committee of the curriculum committee or some other grouping or arrangement, little use is made of students' imput in the selection process.

There appear to be no valid reasons why students should not play an active role in the book selection process. For those individuals who are interested in making the students active participants in the book selection process but are unable to do so for lack of a viable vehicle, this presentation advances a method of evaluating textbooks whereby the evaluation methods and techniques will provide the opportunity for active student participation in the process without bringing any dimunition of the standards currently applied in the selection process.

The paper will be presented in three stages: the first stage is devoted to the structural and readibility analysis of the text; the second stage deals with elements and application of the Cloze procedure; and the third stage concentrates on the analysis of results from the Cloze procedure including the final comparision of textbooks. While the first and third stages of the paper are the complete domains of the faculty evaluators, the second stage involves the student evaluators under the supervision of faculty evaluators.

FIRST STAGE

The book selection process is usually initiated by some concerned faculty members when they conclude that the text currently in use is no longer effective or a newly reviewed text appears to be more appropriate. If an objective search is to be made for a text, the selectors should perform the following:

1. Analyze the structure and layout of the texts being considered.
2. Conduct readibility analyses of the texts being considered.

1. ANALYSIS OF STRUCTURE AND LAYOUT OF TEXT

Keeping in mind that students have only the textbook as their major source of information, the entire book must be analyzed to determine how effectively and efficiently it can accomplish this task. The book selectors, therefore, must evaluate the text from cover to cover to determine if its structure and layout, in addition to the instructional material, are conducive to independent learning. In performing the overall analysis of the prospective text, the evaluators must examine and score the textbooks in the following areas: covers of textbook; table of contents; behavioral or learning objectives; summaries at the end of chapters; paragraph construction; exercises; examples; definitions of terms; references; glossary; index; and illustrations.

Covers of textbook. This area requires considerable attention because it is a major factor in the pricing of texts. At one time, the choice between a paperback and a hard cover text was meaningful because the hard cover text was clothbound. Presently, the hard cover text is paperbound and after a while, sometimes even before the semester ends, the paper begins to show signs of wear and tear. Considering the increasing use of paper in making hard covers and the ever escalating prices for textbooks, instructors should shift to the purchase of paperbacks where they exist and demand them when they do not exist.

Table of contents. The table of contents previews the material which is contained in the text. This item can vary from shallow where only the chapter headings are listed, to detailed where all sections and subsections of the chapters are listed. If the table of contents does not list all of the sections in a chapter, the first pages of the chapters should be examined for the listings of the sections and subsections of the chapter. This approach is followed in some texts and examples can be found throughout the text *Writing and Communicating in Business* (J. Harold Janis).[1] When properly constructed and utilized, the table of contents not only serves as an

[1] J. Harold Janis, *Writing and Communicating in Business* (third edition) New York: Macmillan Publishing Co., 1978.

introduction to the material; but provides a roadmap for the reader. Its importance to the reader can be compared to the necessity of a properly constructed roadmap to a person driving through unfamiliar territory.

Behavioral or Learning Objectives. These can be useful to students if they are instructed in the proper use of these aids which can assist them in preparing mentally for the reading assignment ahead. These items can serve also as a check on how well the student comprehends the material after completing the reading assignment. Behavioral or learning objectives should be designed so that a competent individual could use them to separate successful learners from unsuccessful learners. They should be identified by name, the condition of behavior occurrence should be described, and the criteria for acceptable performance should be specified.

Summaries. These should be provided for each chapter since they help the student in comprehending the material and in preparing mentally for the reading assignments, when they are read prior to reading the entire chapter, (a practice which should be encouraged by the instructor). The summary should restate the major points or concepts presented in the chapter while being brief and to the point. Above all, the summary should not deal with any matters which were not stated or implied in the chapter.

Paragraphs. The paragraphs should be properly constructed so that the sense of the paragraph flows, there is a continuity between thoughts presented, and a topic sentence is present when needed. If a paragraph is to make a substantial contribution to an explanation or argument, it should have a topic sentence that summarizes what the paragraph states, representing its central thought.

Exercises. The end of each chapter should be followed with exercises that are in the same vein as the text material in the chapter. For example, if the text material were conceptual, the exercises should be the same; if the text material were problem oriented, the exercises should be problem oriented also. The exercises should be geared to test skills which the reader has obtained from the text material, and they should be closely linked to the behavioral or learning objectives for the chapter.

Examples. If the text is problem oriented or is intended to increase the student's problem solving abilities, there should be ample examples of approaches to problem solving. The examples should provide a firm foundation for the student to tackle the problems presented in the exercises. Students should not be left to their own designs in finding techniques to solve problems.

Definition of Terms. There is a tendency for some terms to be defined more than once in the text. In these cases the evaluators should make certain that there is consistency in the definitions, especially of key terms. During this phase of the examination process, the evaluators must bear in mind that slight variations in definitions may cause confusion among students who lack the expertise and familiarity which the evaluators and author(s) have of the subject matter.

References. Considering the continued expansion of most fields of knowledge and the limited space textbooks present, all textbooks should provide additional references for the student. These references should be listed at the end of each chapter. Not only should books be presented but periodical articles should be a key ingredient, since they act as an update to materials already encased in a textbook.

Glossary. This is a fitting addition to any textbook in any field, especially when the textbook is to be used by initiates who are not yet fully acquainted with the argot of the field. Despite the beneficial aspects of this welcome addition, there can be trouble if the definitions in the glossary do not agree with the definitions and usage found in the text. The text tends to give very terse or brief definitions whereas glossaries give elaborate and elongated definitions which are always out of context. The glossary must be compared with other definitions appearing in the text to determine the consistency between them.

Index. Indexes should be subject oriented rather than names or author oriented. There are three basic types of indexes: subject, name or authors, and integrated where both subject and names or authors are listed. Subject indexes can be shallow with only the major subjects indexed with no subcategorizations. This type of index is comparable to a table of contents which lists only the titles of chapters and no sections or subsections. Where integrated indexes are to be found, they can sometimes be overcrowded with names and lacking of subject matter, which is more important to students than names or authors. In these instances, the evaluator

might be surprised at the ratio of names to subject listings on a per category basis (A,B,C. etc.) or on an overall basis. Evaluators should be looking for a very comprehensive subject index and a separate name or author's index, if one is needed.

Illustrations. These are forms of definitions and as such should be properly constructed so that students could glean the necessary information from them on an independent level. These items are intended to reinforce the material presented in the text and thereby assist the reader in comprehending the material. To achieve these ends, the illustrations should be self explanatory. They should be placed as close to the point of mention in the text as possible with their values diminishing the farther removed they are from their points of mention. For greatest value and impact, illustrations should be designed so that all items presented in them are fully identified or identifiable on or from the illustration.

2. READABILITY ANALYSES

This stage of the selection process should follow the structural, layout and contextual inspections which should have convinced the selectors of the appropriateness of the text(s) under consideration. There are many methods available for conducting a readibility analysis. The methods recommended are those which utilize number of words, number of sentences and number of syllables. Those techniques that are based on the hard words concept should be avoided. Falling into the latter category are systems such as the Gunning Fog index and in the recommended category are the Flesch technique and the Fry Method which are considered complementary.

Before beginning the analysis, the selectors must establish some important ground rules: 1) number of pages to be sampled; 2) method of sampling; 3) method of selecting the sample pages; and 4) starting point on page.

Sample Size. For any book with less than 500 pages, the sample size should be 25 pages. Books 500 pages or longer should be subjected to 5 percent sampling. Twenty five samples would provide sufficient points to plot a smooth curve of the distribution obtained. In addition, more reliable statistics would be obtained.

Sample Selection. The technique used will depend on the preferences of the selectors. Some suggested means are: 1) Random selection where a table of random numbers can be used to determine the pages; 2) stratified random sampling where pages can be selected at random from certain sections of the book; 3) page numbers selected from a hat after slips of paper with each bearing a page number have been placed in a hat; or 4) any other random process.

Page Selection. Rules have to be specified for dealing with a selected page which has no text. The analyst can move forward or backwards until a page with text is encountered. A coin can be flipped when this situation is encountered or some other decision rule can be used.

Starting Point. There should be a predetermined starting point on each page sampled. A decision must be made as to whether the sample will be taken starting from the top of the page, the middle or at the bottom, or any other easily identified point on the page.

When conducting the readibility analysis, the selectors must determine if the texts have been designed in a manner that masks the true reading level of the text, because there are certain short cuts which can be used to give the appearance of a reduced reading level that would not be a true representation of the reading difficulty of the text. Some of the techniques which can be used are:

1. Instead of using commas, they are replaced with parentheses which increase the number of sentences.
2. Use of numbers to enumerate instructions, when numbers are not needed for sequencing.
3. Use of unnecessary abbreviations to reduce the number of syllables.
4. Using pronouns to reduce the number of syllables.
5. A proliferation of headings which increase the number of sentences.

Caution must be exercised in expressing the readilibity level of a text in terms of an arithmetic mean, because a lot of information can be submerged. If the plot exhibits skewness, which is manifested in the curve sloping to one side in a disproportionate manner compared to the other side, or bimodality where the plot peaks at two different reading levels, the mean is an inappropiate measure of the readibility level of the text. A more meaningful measure of the readibility may be the range which shows the lowest reading level and the highest

reading level of the passages sampled. The frequency distribution plot will show this item in addition to the number of samples which were at a particular reading level; hence, the frequency distribution curve of the samples should be plotted for each text sampled. Book selectors do not need to concern themselves with the design and the performance of this extra chore, since there are commercial computer programs which can perform this task. One such program is STAR by General Electric.

SECOND STAGE

The steps undertaken at this stage of the evaluation process are limited to: 1) designing the tests; and 2) administering the tests. The major vehicle in this phase is the Cloze procedure, a technique which is normally used to determine the student's ability to read a piece of material. Before entering into the design and administration of the test procedure, an overview of the Cloze procedure is in order.

Overview of the Cloze Procedure. Pages of the text to be analyzed are selected at random and from these selected pages, passages of 250-300 words are chosen. From these passages every fifth word is deleted beginning with the second sentence and ending with the next to last sentence. The first and last sentences are left intact. The passages with the deleted words which have been replaced with lines of equal length are given to those participating in the program with instructions that they are to fill the blank spaces with words they think were deleted. The participants are instructed that their responses must be exact matches with the words deleted with no penalty for misspelled words.

Designing the Tests

The design of the tests consists of the following: 1) selecting the pages; 2) selecting the paragraphs; and 3) deletion of the words.

Selecting the Pages. Pages can be selected by drawing page numbers from a hat or by using a table of random numbers or some other random process. Before selecting pages to be sampled, some decision rules must be established:

1) For any book under 500 pages in length, 25 pages are to be sampled. For each 20 pages or fraction in excess of 500 pages, an additional page should be selected.
2) If the page selected has no text, it must be decided whether the page preceding or succeeding is selected. Depending on the direction selected, the evaluator continues in that direction until a usable page is encountered.

Selection of Paragraphs. Each passage selected should start at the beginning of a paragraph and it should be continuous text ranging in length from 250-300 words. In selecting the paragraphs, these decisions must be made:

1) Starting place on each page must be predetermined. Since there may be more than one paragraph on a page, there must be a starting place on the page - the top, the bottom or the middle. This can be randomly determined for each page.
2) If the paragraph selected continues on the next page and if the 300 word count has not been reached, the count continues on the next page to maintain the continuity of the text.

Deletion of Words. The first and last sentence of each paragraph should remain intact. Starting with the second sentence of the passage and ending with the next to last sentence, each fifth word should be deleted and replaced with a line. Each line must be of the same length so as not to clue the reader as to the length of the deleted word. These additional rules should be observed:

1) Do not be concerned with the length of the word selected for deletion; if the fifth word is 'a', 'the', 'in', 'or', 'I', etc., it is deleted and replaced with a line.
2) The blank spaces in the passage should be numbered consecutively, beginning with 1. This will assist greatly in the scoring of the test.
3) Attempts should be made to have each passage contain exactly fifty items. This stipulation is made to ensure convenience in scoring and test reliability.
4) If a word is in quotation marks in the text, leave the quotations when the word is deleted.
5) If the word is in parentheses, leave the parentheses when the word is removed.

Administering the Tests

This phase of the project consists of the following: 1) selecting the students; 2) conducting the tests; and 3) scoring the tests.

The tests should be administered at the beginning of the semester, before the students have had the opportunity to develop familiarity with similar materials and to create the same conditions students handling the text will be confronting.

Selecting the Students. Students selected for the project should be those who are going to begin a course in which the text can be used. Students should be selected from all of the sections in which the course is being offered. If all of the students cannot be used, selection should be by random process in order to minimize biasing effects.

There are many variations in obtaining the test population with the number of samples, the number of sections and the number of students taking the course being the important independent variables. When the number of samples is large and the test population is large it would be a very costly undertaking to administer all of the tests to every student. In these circumstances, the population can be divided into subgroups and portions of the test can be administered to each subgroup which has been selected through some random process. If there is only one section of the course being offered and several texts to be tested, all of the individuals can be utilized in the testing process since duplication of tests would not be too costly, but this procedure too would depend on the magnitude of the three variables.

Since this exercise is in the realm of course material, students who participate in the exercise can be given credit, legitimately, for course work, because in addition to participating in the selection process, they will be demonstrating some knowledge of the course material with their responses.

Conducting the Test. Each of the students selected gets a copy of the test which they should not have seen before:

1) When the tests are distributed to the students along with necessary instructions, the proctor will read the instructions aloud while each student reads them silently.
2) The students are told that the words deleted can range from one letter to a polysyllablic word.
3) The student must be informed that only the correct word will be accepted, even if it is misspelled. No synonyms or homonyms will be accepted.
4) There is no time limit to complete the exercise.
5) The students are advised to read the passage before placing words in the blank.

Directions to the students with each passage might read as follows:

> This selection has a number of words deleted, however, the first and last sentences of the passage are complete. First, read the entire selection and then re-read it. After at least two readings of the passage, complete the answer sheet by writing next to the number in each blank the word you think makes sense.in the sentence.

Scoring the Tests. This is a very simple procedure since only the correct answers with allowances being made for misspelled words are accepted. The tests results are placed in three categories depending on the number of correct answers:

Level III or the Independent level	This requires that 60% of the answers be correct. This score indicates that the material reads at the independent level and students should not encounter difficulties with it.
Level II or the Instructional level	A 41%-59% score on the test places the material at the instructional level and students reading the material will need some assistance.
Level I or the Frustration level	At 40% or less, the readibility of the material is at the frustration level and it is not likely that the students will be able to read it.

THIRD STAGE

At this step of the selection process, the procedure is back in the hands of the book selectors and they will be charged with analyzing the results of the Cloze tests, comparing the textbooks based on the Cloze tests and finally making a selection.

Analyzing the Results

After the scores on each passage for a particular text have been converted to percentages, an interpretation of the readibility of the particular text can be made.

In order to categorize a text as being at a particular reading level, a majority of the passages in the sample must be read at that particular level and a passage is classified as being read at a particular level only if a majority of the student scores on a particular passage is at a particular level.

After the results have been analyzed, the following decision rule is instituted:

1. If the majority of the passages for a particular text have been categorized at Level I, the text should be rejected without debate.
2. If the majority of the passages have been categorized at Level II, the text should be held in abeyance.
3. If the majority of the passages have been categorized at Level III, the text should be labelled acceptable.

Comparing Textbooks

Since texts which show a majority of passages at the Level I stage will be rejected outright, no further consideration need be given to them. Thus, the evaluators will be concerned only with those texts which show a majority of passages at either Level II or Level III.

The text which has the greatest percentage of passages at Level III should be selected outright with all others rejected. It must be remembered that at this stage in the selection process, the texts being considered are those which have a majority of passages at Level III.

If there is no clear-cut winner based on a majority of passages at the independent level or Level III, then the evaluators have to go back to the instructional level to decide a possible winner. A majority of passages at the instructional level should never be the basis for selection of a text book. However, when no clear-cut selection can be made via the decision rule on majority of passages at the independent level, the percentages of passages at the instructional level should be combined with the percentage of passages at the independent level for each text that has a majority of passages at the instructional level. The text which has the greatest combined percentage should be selected. If a tie results among textbooks using this process, the textbook with the greatest percentage of passages at the independent level should be selected to break the tie. Faculty evaluators should remember that when a text is selected on the basis of results obtained at the instructional level, reading strategies must be introduced to assist the students in handling the material.

BENEFITS

Considering the prices students have to pay for textbooks and the purpose textbooks are to serve, they are investments in every sense of the word. On this basis alone, textbooks should be carefully selected by those entrusted with the responsibility. In addition to providing the best "investment advice" in a given situation, the recommended selection procedure also yields special benefits to instructors, students and publishers.

Instructors' Benefits. Some of the benefits accorded the instructor follow:

1. The instructors have a first hand knowledge of how well students can handle the text material. With a proper structuring of the selection procedures, the instructors can determine how well students handle the conceptual and instructional materials presented in the text.
2. The instructors will be conducting their duties in a responsible and professional manner since care would be taken in selecting a text which the students can master, an important task which may be overlooked and/or taken for granted in current book selection processes.
3. Complaints by students about the difficulty of texts can be more readily resolved by presenting each group of students with results from the testing of the text via the Cloze procedure.
4. Many times there is only one text in the area of interest. In such cases, the instructors will be able to zero in on the problems with the text, if such exist, and thus devise some reading strategies for the students.
5. By using students in the selection process, text selectors will know before the fact, rather than after the fact, that students cannot handle a particular text.
6. Overall, the instructors will have a good idea of the reading abilities of the students as they relate to that particular text. This information can be used to devise educational stategies to enhance the reading abilities of the students.

Students' Benefits. Some of the benefits to be reaped by the students follow:

1. There is a satisfaction in being able to participate in a meaningful fashion in a project which directly affects their current and future progress.
2. There is increased confidence in their chances of succeeding since they will be reading texts which they or their peers have found to be readable.
3. By assuming such active roles in the book selection process, they should develop a more positive attitude towards the textbook in particular and school in general.
4. It is generally assumed that students should be able to learn independently from a textbook. They are now provided with an index of the ability of the text to be read independently.
5. Since textbooks are intended for students to read, their participation serves as a check on the instructors' possible selections.

Publishers. The publishers will benefit because:

1) They will be offered more reliable and positive tests of their products since the students will be included among the judges.
2) There will be independent assessments of the readibility of their texts by unbiased sources such as instructors and students.
3) Publishers, like instructors, will also have a valid method of determining the reaction of students to texts.

CONCLUSION

A more effective and beneficial method of selecting a textbook for use in a course is to have students participate in the selection process. Student participation could increase the standards now applied to textbook selection because of the additional stages introduced. With the utilization of the Cloze procedure, students can play a meaningful and active role in the textbook selection process, yielding benefits which not only accrue to the students but to instructors, institutions and publishers as well.

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OVERCOMING THE DISINCENTIVES TO STUDY ABROAD
The RCC Israel Program: A Model

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International and intercultural education is no longer viewed by United States colleges and universities as a frill for an elite few of their students. Recognizing the increasing interdependence of countries, forward looking institutions of higher learning in the United States feel that those students who gain global literacy as part of their undergraduate education will have a competitive edge in the job market of the 80's. These institutions, now committed to using the world as teacher, send their students to study in many countries to gain those skills and sensitivities which will better equip them to live and work in the "world community" that is emerging.

No region in the world so nearly approximates the political and cultural vortex that moves international relations as does the Middle East. Central to this area stands modern Israel, repository of the history of Western and Eastern man and a microcosm of all the forces and issues that are shaping and threatening civilization. It provides, therefore, a remarkable learning environment for American students of all persuasions, talents and interests.

The Israeli universities and their American representatives have attracted many students to study at their institutions. Other organizations have been successful in sending numbers of college-age individuals to tour in and experience Israel. Without detracting from the successful efforts of these organizations and institutions, it is apparent that only a small percentage of students who potentially would be interested in study in Israel actually do participate in such a program. Just a minute fraction of students study in Israel as part of their collegiate experience. The organizations presently recruiting students do not have internal or ready access to the colleges of the U.S., their students, and the power structure of their professoriate and administrators. Only an alliance forged between the agencies and organizations seeking to encourage students to study in Israel and American colleges and universities can overcome these disincentives.

What are the disincentives we must overcome?

Nine years of working closely with students, college faculty and administration, and community leaders have revealed the following obstacles to student participation in study programs in Israel:

1. *U.S colleges and universities are hostile to the notion of their students leaving their institutions, enrolling elsewhere, even temporarily, to complete a part of their degree programs abroad.* The U.S. college or university loses tuition and/or funding when students register elsewhere. In days of diminishing enrollments and increased competition among institutions for the decreasing population of college-age students, programs that are perceived by U.S. colleges as competitive, in that they take students off their rolls, will be discouraged; students will not readily be allowed to transfer credits earned abroad towards their U.S. degrees. Only when a student maintains enrollment in the U.S. institution does that institution encourage study abroad.
2. *U.S. colleges and universities are reluctant to accept tansfer of credits from institutions and programs over which there is no American academic supervision.* Many universities will accept credits only if the program is in some way affilliated with their institutions and supervised by their faculty. However, university officials perceive that starting a program in Israel and monitoring it requires much time and expense, not the least of which is sending a minimum of one faculty member abroad to supervise the work and well-being of the students.
3. *Students have limited access to current information about the mulitplicity of study opportunities in Israel.* Students and their parents require counselling by American academics who are familiar with the wide variety of study opportunities available in Israel and the precise differences between them, as well as with the American system of higher education. They seek counsel from individuals who have no vested interest in any particular program or institution in Israel, but rather desire only to match the student to the most suitable learning environment. Even in major U.S. cities with large college populations, such counselling is virtually unavailable.
4. *Students are hesitant and often unwilling to engage in study abroad without the prior assurance that the credit they earn will be accepted by their U.S. college or university.* Those who do study abroad often spend unproductive time while in Israel and upon their return attempting to negotiate credit transfer.

5. *The programs which are best known by U.S students and universities are elitist, in that they are designed for and enroll only students in the top 5-10% of their class.* Thus, the large numbers of students in the U.S. who may be only slightly above average or average believe that there is no academic program in Israel which will accept them.
6. *Students considering study in Israel, and their parents, want to have someone in Israel to help solve problems they envision may occur.* Students frequently require academic guidance from an individual familiar with the American educational system and fear that while in Israel they will be unable to obtain information and assistance for re-entry to the U.S. educational system. Parents feel it may prove difficult in times of emergency to contact their children because of problems in communicating over great distances.
7. *Many students perceive a year of study in Israel as exciting, but also irrelevant to their ultimate career or professional goals.*
8. *With rising airfares and cost of living, students find it increasingly difficult to finance a semester or year of study in Israel.* Most students who presently receive state and Federal financial aid and benefit from guaranteed student loans, must relinquish this assistance if they wish to study in Israel.
9. *Most students presently reached by organizations and institutions recruiting for study abroad are those who are affiliated with youth groups or whose parents are members of Israel-affiliated organizations.* The vast majority of "unaffiliated" students, those who would most benefit from an intense educational experience in Israel, are never reached with program information.

Rockland Community College, a unit of State University of New York, has created an Israel program designed specifically to overcome the above disincentives. This institution, located in a suburb of 260,000 people, presently sends between 200-300 students to study in Israel each year on semester or year programs. The success of the model developed by Rockland over the last eight years has been demonstrated by the large and increasing numbers of students electing to enroll in Rockland's program, and by the quality of the emotional and intellectual experience gained by these students.

The Rockland model has two unique elements, the use of a "sponsoring" U.S. college and the offering of a vast array of study opportunities in which a student may participate.

1. *The student enrolls in a U.S. "sending" institution, and credits and transcripts are issued by the U.S. college or university, rather than the Israeli institution.*
   a. The U.S. colleges and universities in which the students are enrolled are sponsoring institutions of the Israel program and become active recruiters for it. Access to the student population and cooperation from the professoriate, the administrators, as well as the power structure-including community leaders and governing boards of trustees - is no longer a problem. The program of study in Israel becomes part of the U.S. institution's mission, rather than an alternative educational opportunity that threatens to diminish the college's enrollment. Since the student enrolls and pays tuition to the U.S. institution, the college does not lose its budget support for students who are studying in Israel, and an important disincentive present in other approaches is removed.
   b. Public college students have a fair share of their instruction in Israel supported by the public college budget as would be the case if they were studying on the home campus. The student pays regular tuition to the U.S. college and is considered in every way a home campus student. Since the college continues to receive its normal operating aid from its budget for each student studying in Israel, it pays a portion of the student's expenses for instruction in Israel, using a formula that provides support for the student abroad roughly equivalent to the instructional expense incurred for a home campus student.
   c. An office staffed by a director, academics and counsellors exists in Jerusalem, to provide supervision of the academic and emotional well-being of all students.
   d. Colleges and universities enrolling their students using this model are assured that their academic standards are met by the institution abroad since the Jerusalem office director moniters the work of all students. The expense of maintaining an on-site faculty member, therefore, becomes unnecessary.
   e. The students are assured of recognition and credit for their study in Israel before leaving, by being registered in a U.S. college that sponsors the program and issues U.S. credits and transcripts upon their successful completion of the program. The students are thereby assured in advance that the credits earned in Israel will be applicable to the U.S. degree towards which they are working.
   f. The educational experience is seen as relevant to the student's degree program, as it is chosen in concert with college advisors familiar with the student's needs and able to help the student design programs which satisfy degree requirements.

g. Students are provided with academic, vocational and personal counselling both in the U.S. and in Israel, by American academics and counsellors, paid by the U.S. budget.

h. Parents are assured that there is an American office of the students' U.S. college which is responsible for them, which can easily be contacted in times of emergency, and through which their children may be immediately reached.

i. Students studying in Israel, in addition to receiving financial support from the sponsoring U.S. institution, continue to be entitled to whatever scholarship and financial aid they would receive studying at their U.S. home campus.

2. *Through a process called academic brokering* students are helped to find a university, college or other learning environment in Israel appropriate to their talents and interests. All of Israel is potentially used as a part of their curriculum, which is not limited to any single institution, program or course.

a. *College and University Study Programs.* Students study at any of Israel's major universities or colleges. U.S. counsellors maintain academic liaison with all of Israel's universities and colleges, therefore, they can aid students in selecting the institutions best suited for them and also help with their application process.

b. *Specialized Schools and Institutions of Higher Learning.* Israel has numerous colleges and institutions of higher education that offer programs and courses with a specialized focus. Some such programs prepare U.S. high school graduates for teaching positions, especially of Judaica in the U.S. and Israel. Many such institutions specialize in the teaching of ancient and modern Israeli history, Hebrew language and culture, and medieval and modern literature. Other programs offer students the opportunity to study at religious institutions while pursuing "on contract" additional academic work enabling them to earn credit in such subjects as Hebrew language, Talmudic literature, Bible, Jewish history and philosophy.

c. *Alternative Study Opportunities.* As an alternative to study at an Israeli university or college, or in many cases in conjunction with such study, students are placed in educational settings that allow Israel to become the curriculum. These programs unite education and experience, so that the student is simultaneously learning, doing, acting and feeling. Such programs combine formal classroom lectures, independent study and fieldwork. A student wishing to explore a particular area of study may be assigned to a qualified Israeli expert in that field who serves as a mentor through an academic contract. Other programs offer students the opportunity to learn about Israel, its culture and its people "from the inside" by spending some period of their study in a field-work experience living on kibbutz, moshav, or development town in addition to their formal classroom work.

d. *Service Learning Programs.* Service learning academic programs are designed to permit students to earn college credits by working in their field of study and having such work experience form an integral part of their academic program. Service learning is designed for students who wish to combine classroom instruction with practical work experience. In service learning, the teacher is the mentor who helps each student design an individualized learning program, the core of which is the work experience in the student's chosen field. A learning contract between the student and mentor serves as the basis of instruction and includes an appropriate mix of work and service, individual and group tutorials, seminars, and directed independent study.

e. *Individually Designed Study Programs.* Individually designed programs are those wherein students choose the setting for their period of residence in Israel, based on their specialized academic interest or research design. The setting is not in itself academic; it is not an institution of higher learning, nor is it a program organized primarily to teach. Rather, it is an environment which provides the raw material for the student's experience. Such a setting may be a job in a busy hotel, a position on an Israeli newspaper, service as a camp counsellor or recreation director, or an apprenticeship to a designer of stained glass. The learning environment may be a development town, a border settlement, a contested settlement in occupied territory, a kibbutz or moshav where the student chooses to live. This raw material becomes the basis for an academic contract, which focuses the student's attention on various aspects of his/her experience, requires analysis and study, reading, exploration of theory and meaning. A student in one or another of the above-mentioned settings can effectively study, for example, hotel management, tourism, journalism, recreational programming and administration, social problems and dynamics of development towns, politics and sociology of newly formed settlements.

The above model is not an abstract idea, or potentially promising program design. The proven success of this approach is perfectly clear:

1. Rockland has consistently over the last six of its nine years of offering an Israel program sent between 200-300 students to study on long-term programs, making it the largest U.S. program of its kind.
2. Over thirty U.S colleges spanning the U.S. from Massachusetts to California, from Florida to Arizona have formed the College Consortium for International Studies (CCIS), enroll students on their campuses and send their students to Israel to study through the Rockland model and apparatus.
3. Rockland's offices in New York and Jerusalem, staffed by American academics and counsellors, provide unique support services for its students and those of the Consortium colleges:

- counselling of students to find an appropriate educational institution or learning opportunity in Israel
- counselling of students to find a U.S. host college or university offering the opportunity to study in Israel
- program development for students, academic departments and individual faculty members
- institution and community consultants for program initiation and development
- student pre-departure counselling and orientation
- academic, personal and transfer counselling of students while abroad
- program evaluation and control.

4. The success of Rockland's Israel program has led to increased community consciousness of Israel as well as to the desire of many students to continue their studies in the U.S. Many students, stimulated by their year in Israel, want subsequent study in Judaism and the Middle East, or related areas in which they became interested during their study abroad; others desire a preliminary year of study before their departure, which usually has a "multiplier effect" in terms of the benefits derived from their study in Israel. Such response to Rockland's Israel program has led to the creation of an on-campus Israel and Judaic Studies program that serves several hundred students and community members each year. A Rockland student can now earn an Associate degree in International Studies through a combination of four semesters of Israel-based and campus-based studies.

   A valuable development has been the growing interest of the local community in relating to the programs, in diffusing information about them through local religious and secular agencies, and most recently in raising funds for those students who need help with airfare to and expenses in Israel. By hosting speakers and cultural events on Israel and using income so generated for student travel to Israel, community leaders believe they are simultaneously raising local consciousness, supporting Israel and strengthening local public education by adding the dimension of international experience.

The experience and the model developed by Rockland and used by the Consortium colleges can be used by other colleges to send their students to Israel. In some measure, the mechanism for expanding the use of this model has already been created. In hopes of using this approach and duplicating its successes nationally and internationally, the Center for Study in Israel was formed, as an independent non-profit corporation, privately funded. Advised by distinguished academics, and led by a full-time director, its purpose is to implement those strategies that will continue to increase the number of U.S. students studying in Israel, to improve the quality of their educational experience while they are there, and to expand the opportunities available to them. Using the assistance of the Center, colleges and universities wishing to make study in Israel immediately available to them, can now do so.

CREATIVE MARKETING: STUDENT RECRUITING METHODS UTILIZED BY TWO-YEAR COLLEGES

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Although budgets may be tightened, vigorous and creative recruiting efforts characterized the majority of two-year schools examined by this nationwide study. Recruiting of students will become even more vital as the competition for enrollments increases.

Since colleges have not been pressured financially by declining enrollments for more than a decade, it is not surprising that the literature on recruitment of students is comparatively recent. Much of this literature, in addition, is concerned with four-year liberal arts colleges. This is to be expected, when one considers that the four-year liberal arts colleges are those which are being hardest hit by enrollment declines.

Two-year colleges in the United States are highly diversified in both objectives and subject matter. Generally, the two-year school becomes increasingly attractive as inflationary pressures erode middle class spending power. Moreover, many students are unsure if they desire a four-year education. Associate Degree programs can provide the option of further study, combined with a diploma which permits employment after two years. Many young adults do not see four years of college as a guarantee of a secure or meaningful future. Some are calling a four-year education "seat time," and regard these four years as a wasteful holding process.[1] Because of these factors, the two-year colleges have considerable attraction for increasingly large segments of the traditional student population.

An emerging segment of the student population which is uniquely served by the two-year college is the adult/continuing education populace. Fueled by needs for retraining and/or changes in career objectives, the adult returning to school is becoming an increasingly sizeable concern in recruiting. Two-year schools have expended considerable effort in providing for the special needs of the adult learner. Substantial portions of college budgets now depend on the successful recruitment of the adult/continuing education student.

Historically, far too many educators have found it beneath their academic dignity to vigorously seek out new students. Attitudes are changing, especially as financial exigency grows. College atmospheres can offer a friendly environment for a variety of functions: "teaching authorship, faculty evaluations, curriculum development, the creation of new student services, guidance and counseling clinics, financial planning and physical development . . . none of which would exist without the active and effective solicitation of new and promising students." [2]

The current trend in student recruiting reflects a change in marketing style. If marketing intensity is considered as a continuum, at one extreme would be aggressive marketing. Aggressive marketing relies heavily on promotion. At the other extreme of the continuum would be minimal marketing, that is, marketing which relies mainly on the product. Somewhere in between the extremes would be a third alternative, balanced marketing. [3] Generally, institutions of learning are moving from minimal marketing toward aggressive marketing. Also, as the competition for students becomes more severe, the marketing of programs are becoming increasingly aggressive.

Two-year colleges seem heavily involved in the implementation of marketing concepts. Two-year institutions appear better aware than their four-year counterparts that the satisfied student is the key to institutional stability. This concept includes everyone in the institution: faculty, staff, and administration.[4] Such schools are aware of the importance of market research, especially with regard to programmatic influences. Students evaluate colleges on academic reputation, special education programs, and ability to find jobs after graduation. [5] Some institutions are now considering a total marketing system as far as student recruitment is

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[1] Johnson, R.E. Communications through consortium: a must for private colleges. *Journal of the National Association of College Admissions Counselors*, 21, July, 1976, 30-32.

[2] Williams, J.W. Recruit or retreat! *Journal of the National Association of College Admissions Counselors*, 22, August, 1978, 21-23.

[3] Kotler, P. *Marketing for Non-Profit Organizations*, Englewood Cliffs, NJ, Prentice-Hall, 1975.

[4] Johnson, D.L. Marketing the "un-cola" college. *Community and Junior College Journal* 48, December/January 1977-1978, 14-17.

[5] Brown, J.A. The role of academic programs in institutional marketing. *New Directions for Higher Education*, 21, Spring, 1978, 1-6.

concerned, with admissions activities being combined with placement work, thus providing potential students with a more complete service, including career planning.[6] Two-year colleges are developing recruiting methods which are aimed at approaching potential students where they are, both psychologically and physically.[7] If the current trend is any indication, the "publish or perish!" maxim will be replaced by the "recruit or perish!" warning for survival.[8]

Research Methodology

A questionnaire checklist was generated utilizing previous research on recruiting methods. A list of some 40 items was prepared by combination of the research instruments and findings of previous works by M.F. La Bouve,[9] W.L. Campbell,[10] J.A. Lockard,[11] V.D. Luft,[12] and R.V. Krejcie.[13] Of these, only the work by Krejcie dealt with recruiting by two-year institutions; the others were studies of the recruiting practices of four-year schools. An assumption was made that there would be substantive similarity in recruiting practices employed by both two- and four-year colleges. Subsequently, this assumption was proven accurate. In addition to the previously mentioned checklist, opportunity was given respondents to enumerate any recruiting methods being utilized which did not appear on the checklist. The rationale for this provision was to uncover methods not found in the previous studies.

The survey instrument was mailed to the Presidents of the 1084 non-religiously affiliated institutions in the United States which were listed as two-year schools in the *Education Directory, Colleges and Universities, 1978-1979.*[14] Each institution received a questionnaire, along with a stamped, self addressed envelope. Three weeks following the date of the first mailing, those institutions that had not responded were sent a second questionnaire, along with an appropriate letter. Each institution was assigned a number which was written on the questionnaire and the envelope sent to the institution. Returned questionnaires were maintained in files according to state of the Union and in numerical order.

The above procedure resulted in a return of 860 usable responses, a 79.3 per cent rate of return. Some 88.1 per cent of the respondent institutions were public colleges.

Findings

With the inclusion of the checklist items, some 108 methods of student recruiting were enumerated by the respondent institutions. New York two-year colleges accounted for 61 of the total responses received, with 77.2 per cent returning usable questionnaires.

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[6] Steele, E.W. College relations: a bright future if we know what we're talking about. *Journal of College Placement,* 38, Spring, 1978, 38-41.

[7] Rinnander, E. Recruiting adult students. *Community College Review,* 5, Summer, 1977, 55-60.

[8] Messer, D.E. President as recruiter. *Journal of the National Association of College Admissions Counselors,* 21, July, 1976, 9-11.

[9] La Bouve, M.F. A study of undergraduate student recruiting programs in Southern Baptist colleges and universities (Doctoral dissertation, Florida State University College of Education, 1971). University Microfilms No. 7125786.

[10] Campbell, W.L. A comparison of recruitment practices in private liberal arts colleges and universities. (Doctoral dissertation, George Peabody College for Teachers, 1972). University Microfilms No. 7225362.

[11] Lockard, J.A. A study of freshman recruitment practices and their effectiveness in selected small private colleges in Iowa (Doctoral dissertation, Iowa State University, 1974). University Microfilms No. 7423745.

[12] Luft, V.S. The development of guidelines for recruitment programs in agricultural education. (Doctoral dissertation, Ohio State University, 1974). University Microfilms No. 7424363.

[13] Krejcie, R.V. The relative effect of selected practices and media upon student enrollment in industrial-technical and engineering technician programs at the junior college level (Doctoral dissertation, University of Missouri, 1968). University Microfilms No. 8903393.

[14] Podolsky, A. & Smith, C.R. *Education Directory, Colleges and Universities, 1978-1979.* Washington, D.C., Education Division, United States Department of Health, Education, and Welfare, 1979.

Student Recruiting Methods Utilized by Two-Year Colleges

	Description of Item	Number of Responses	Percentage
1.	"College Day" Programs at high schools	759	88.3%
2.	"College Night" programs at high schools	727	84.5
3.	High school visitation by admissions representatives	811	94.3
4.	High school visitation by faculty members	659	76.6
5.	High school visitation by (present) college students	403	46.9
6.	High school visitation by alumni	78	9.1
7.	"Open House" or weekend, everyone invited	489	56.9
8.	Functions or programs that bring prospective student to Campus	735	85.5
9.	(Arranged) individual students visits/tours	735	85.5
10.	Programs for parents on Campus	225	26.2
11.	Bringing high school guidance counselors for programs on Campus	726	84.4
12.	Personal letter to student prospects from administrators	607	70.6
13.	Personal letter to student prospects from faculty members	383	44.5
14.	Personal letter to student prospects from present students	70	8.1
15.	Personal letter to student prospects from alumnus or alumna	35	4.1
16.	Home visitation of student prospects by administrative representative	112	13.0
17.	Home visitation of student prospects by faculty representative	74	8.6
18.	Home visitation of student prospects by student representative	33	3.8
19.	Home visitation of student prospects by alumni representatives	14	1.6
20.	Provision of faculty or administration speakers for area graduation exercises	442	51.4
21.	Telephone call to prospective students by administrators	381	44.3
22.	Telephone call to prospective students by faculty members	290	33.7
23.	Telephone call to prospective students by present students	130	15.0
24.	Telephone call to prospective students by alumni	36	4.2
25.	Availability of program or individual departmental brochures	791	92.0
26.	Availability of general information brochures, such as financial aid	830	96.5

	Description of Item	Number of Responses	Percentage
27.	Use of mass mailing campaigns	686	79.8
28.	Periodic newsletters for high school guidance counselors	353	41.0
29.	Availability of formal college catalog to prospective students	783	91.0
30.	Alumni bulletin or paper	177	20.6
31.	Mailing copies of student newspaper to area high schools	311	36.2
32.	Posters about college and programs	561	65.2
33.	Newspaper advertisements	722	84.0
34.	Magazine advertisements	170	19.8
35.	Radio spot advertising	686	79.8
36.	Television spot advertising	360	41.9
37.	College displays at fairs, malls, etc.	737	85.7
38.	College programs in cooperation with local civic organizations	530	61.6
39.	Advertising specialties -- carrybags, matchbooks, pens, or similar items with the imprint of the college on the object	388	45.1
40.	Cooperative recruiting efforts with other institutions	348	40.5
41.	High School Day (on college Campus)	6	0.7
42.	Recruiting of veterans	1	0.1
43.	Visits (to Campus) by high school principals	1	0.1
44.	Distribution of schedule tabloid in college service area	2	0.2
45.	Establishment of career center	1	0.1
46	Various types of contacts with high school guidance counselors	58	6.7
47.	Inviting high school students to college events	1	0.1
48.	Maintaining an attractive physical education program	2	0.2
49.	Establishing scholarship program	8	0.9
50.	Increased advertising/marketing effort	2	0.2
51.	Utilization of students as recruiting counselors	12	1.4
52.	Word of mouth (local populace)	111	12.9
53.	Availability of information about college in Doctor's or Dentist's offices	1	0.1
54.	News media coverage of college events/news releases	22	2.6
55.	Area reputation of/quality of student product	10	1.2
56.	Involvement of community advisory groups	1	0.1
57.	Distribution of schedules of classes at malls, supermarkets, etc.	2	0.2
58.	Slide/sound film or motion picture about the college	9	1.0
59.	Registration by mail	2	0.2

	Description of Item	Number of Responses	Percentage
60.	Group visits for accepted (but not yet registered) students	1	0.1
61.	Use of word processor for preparation of communications	1	0.1
62.	Publication of various types of newsletters	1	0.1
63.	Direct mail promotion to selected market targets	24	2.8
64.	Market research for identification of targets for promotion	3	0.3
65.	Letters to parents of graduating high school seniors	1	0.1
66.	Various types of personal selling contacts with prospective students	76	8.8
67.	Various types of personal selling contacts with parents of prospective students	6	0.7
68.	Contacts with agencies/firms which are employers of prospective students	16	1.9
69.	Referrals from other institutions	1	0.1
70.	Special counseling services for area high schools	3	0.3
71.	Exchange teaching, guest lectures by college faculty at area high schools	3	0.3
72.	High school graduate tracking program	5	0.6
73.	Off Campus course/program offerings	2	0.2
74.	Registration by telephone	2	0.2
75.	(Talent) auditions	1	0.1
76.	Use of students as peer counselors	3	0.3
77.	Early admissions procedures for high school students	10	1.2
78.	Special summer session classes	2	0.2
79.	"Back to school" night programs	3	0.3
80.	Mobile "career vans"	15	1.7
81.	High school tutoring programs	1	0.1
82.	Bi-lingual/bi-cultural efforts	1	0.1
83.	College-produced television/radio shows	3	0.3
84.	Recruiting programs/career programs for junior high school students	1	0.1
85.	College musical groups sent to perform at high schools	5	0.6
86.	Competitive team sports programs	2	0.2
87.	"Hot line" telephone services	2	0.2
88.	Postcard campaign, postcards given to students to give to friends	2	0.2
89.	Door to door canvass	1	0.1
90.	Senior citizen courses	2	0.2
91.	Heavy use of billboard advertising	4	0.5
92.	Establishment/expansion of alumni program	1	0.1
93.	Media appearances by faculty and staff	1	0.1
94.	Special-person recruiting (blacks, women, Hispanics, senior citizens	3	0.3

Description of Item	Number of Responses	Percentage
95. Coordination of all marketing efforts under one marketing plan	1	0.1
96. Publication of handbook for use by high school guidance counselors	1	0.1
97. Contests	1	0.1
98. Use of professional advertising agency	1	0.1
99. Brochures featuring current students	1	0.1
100. Publicizing placement results of graduates	2	0.2
101. Development of car/van pool system	1	0.1
102. Use of student aspirations survey	1	0.1
103. Payroll/bank statement stuffers (brochures placed in pay envelopes by bank)	1	0.1
104. Off Campus registration (at industrial/business/organizational sites)	2	0.2
105. Announcements in classes by instructors encouraging students to influence friends to come to the college	1	0.1
106. Good physical appearance of college	1	0.1
107. Contacting former students to return	1	0.1
108. Allowing high school graduates on Campus	1	0.1

Conclusion

Very vigorous student recruiting efforts are being utilized by two-year colleges. These methods are varied and creative in the extreme, to say the least. Especially noteworthy are the less polular methods which are often unorthodox, but most certainly highly innovative. Many of these have been developed to take advantage of certain local service area characteristics. It is these methods which should be noted especially by the personnel responsible for recruitment. Many of these unique recruiting devices can be developed for more universal application.

Presently, recruiting efforts appear aimed primarily at the traditional young adult high school graduate. Such recruiting efforts rely heavily on high school visitations of various types, college day/night programs, and contact with high school guidance personnel. Print media are heavily utilized for this market, such as departmental and program brochures, posters, newspaper advertising, and the traditional college catalog. Advertising specialties, such as pens with the imprint of the college, letters, telephone calls, and even home visitations are also popular promotional methods.

It should be noted that there are many innovative methods listed for attraction of the traditional high school graduate. Examples, such as the use of student recruiting representatives, high school day on Campus and inviting high school principals to Campus, are not popular mechanisms as yet, but are probably quite effective. Parents, also, figure in the recruiting plans of some colleges. Campus programs for parents and recruiting contacts with parents figure in the marketing strategies of numerous two-year colleges.

Another aspect of the recruiting situation is the inception of attraction of the nontraditional student. Such individuals would include adults who desire to return to school or change careers due to technological dislocations, veterans, senior citizens, and other persons who need or desire college education. As enrollments of the traditional high school graduates decline, such nontraditional students are becoming an increasingly large segment of the two-year college body of consumers.

An important detail of recruiting nontraditional students which should not be overlooked is that relatively small changes in services offered by the two-year college can result in gratifying results in this market. For example, off-Campus registration held at an industrial plant might make it much easier for potential students to sign up for classes, and greatly increase the nontraditional enrollment. Likewise, off-Campus program offerings were reported by only a few institutions in the survey, but such programs might yield the potential of large

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numbers of industrial employees who otherwise might not be able to attend classes. Recruiting visits to employers of potential students also were reported. Such visitations offer the opportunity to reach potential students who otherwise might ignore promotional communications.

While this study has yielded an enumeration of recruiting methods being employed by two-year colleges, its major value lies in the opportunity for admissions personnel to utilize these findings to sharpen marketing efforts. While some of the alternatives might seem unusual or costly, the effectiveness of the particular method should be evaluated in terms of whether it can penetrate the market in the college's service area. It is hoped that the findings of this study will contribute to the ideation process.

PART II
DISSERTATION ABSTRACTS

AN EXPLORATORY STUDY OF THE RELATIONSHIP BETWEEN MATHEMATICS ANXIETY AND THE PROCESSES USED BY DEVELOPMENTAL COMMUNITY COLLEGE FRESHMEN TO SOLVE VERBAL MATHEMATICS PROBLEMS

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Statement of the Problem

The primary objective of this research was to investigate the relationship between the level of mathematics anxiety and the problem solving processes, and strategies used by developmental community college students to solve verbal mathematics problems.

Procedure

The study involved a sample that was selected from students in the lowest level mathematics course at an urban community college. The instruments used were: the Mathematics Anxiety Rating Scale (MARS); the Sixteen Personality Factor Questionnaire (16PF); the Quick Test (QT); the Days Problem Set; and a demographic questionnaire. The 36 students in the sample were chosen from those who scored in the upper and lower quartiles of a distribution (n=394) of MARS scores and were classified as either high or low mathematics anxious. The sample was stratified according to mathematics anxiety level (high, low), race/ethnicity (Hispanic, white, black), and sex (male, female).

The QT, 16PF, Days Problem Set, and demographic questionnaire were administered individually in an interview setting. The think aloud technique was used for the Days Problem Set and it was audio-taped. The protocols were coded according to a slight modification of the Days coding scheme.

Six hypotheses were tested for each case by comparing the appropriate scores from the Days Problem Set against two different sets of norms: the median scores for the sample in this study and the mean scores for the sample in the study by Days. Each of these comparisons was done three times - over the simple structure problems, over the complex structure problems, and over the entire set of problems. The data from an individual case were said to have supported an hypothesis if the appropriate score of the student was above (or below) the norm score as predicted by the hypothesis. The G Index of Agreement was used to determine if the support for each hypothesis was statistically significant over all the cases.

Results

The findings indicated, at the .05 level of significance, that higher levels of mathematics anxiety were associated with smaller quantities and varieties of problem solving processes, higher numbers of structural errors and lower product scores. The hypotheses, which predicted that higher mathematics anxiety level was associated with higher uses of systematic trail-and-error strategy and with higher time scores, were not supported. However, had these two hypotheses posited that higher mathematics anxiety level was associated with lower use of systematic trial-and-error strategy and with lower time scores, then the G Index of Agreement would have indicated statistically significant support. Mathematics anxiety was unrelated to quantity of executive errors.

Conclusions

Since the high mathematics anxiety group used significantly fewer quantities and varieties of problem solving heuristics, made more structural errors, and had lower product scores, one could assume that high mathematics anxiety is related to poor mathematical problem solving performance. There was some evidence to indicate that students with high mathematics anxiety are less likely to use systematic trial-and-error and less likely to spend time working toward a solution. Computational ability was unrelated to mathematics anxiety level.

The fact that the trends in this study were more evident among the males than the females, might imply that mathematics anxiety, which may be more prevalent among women, is probably more debilitating among men or mathematical problem solving failure is more anxiety producing among men. Race and ethnicity were unrelated to support of the hypotheses.

RESPONSES TO ANXIETY BY COLLEGE ATHLETES

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Anxiety has been widely acknowledged as an important aspect of sport performance (Fisher [1] and Martens [2]). Anxiety has been shown not only to affect the psychological performance of the athlete by inhibiting the cognitive functioning necessary for concentration, attentional direction and focus, but also to inhibit the physical aspects of performance. The nature of anxiety reactions in basketball was investigated. The study probed athletes' perceptions of, and reactions to, anxiety-eliciting sport situations in an attempt to gain insight into why athletes behave as they do in specific situations.

Subjects (N=40) were selected from four ECAC Division I and III varsity and junior varsity basketball teams during the 1979 basketball season. Five-paper-and-pencil inventories were administered to each athlete: S-R inventory of anxiousness in basketball; personal behavior scale (PBS); similarity of basketball situations, Illinois Competition Questionnaire (SCAT); and the personal assessment questionnaire (PAQ). Upon analysis of the individual differences data three-dimensional solutions were found for perception and reaction. The dimensions were labeled as follows: uncertainty of outcome - Dimension I; ego threat - Dimension II; and anticipation - Dimension III. The analysis of individual differences across athletes was based on a three-dimensional solution of the situational preception and reaction responses. Through these subject maps it was shown that there are personal, idosyncratic and cognitive schemas that will affect perception and reaction. Through factor match analysis three-factor solutions were found for both perception and reaction. Factor I was shown to be ego threat and Factor II was shown to be uncertainty of outcome. However, for perception, Factor III was shown to be threat of failure, whereas, for reaction, Factor III was anticipation. The coefficient of congruence for the perception and the reaction data for Factor I was .95, for Factor II was .38, and for Factor III was .06. The overall coefficient of congruence was .77. This analysis supported previous literature.

It appears that situations perceived as similar will evoke similar responses, and that each athlete will have a personal cognitive schema that affects perception and reactions. The ANOVA's conducted on the mediating variables of anxiety responses reached significance at the .05 level for uncertainty of outcome by competition anxiety, competition anxiety by ability, and competition anxiety by success. The ANOVA's accepted, using the .10 level of significance, were ego threat by competition anxiety, uncertainty of outcome by success, and uncertainty of outcome by ability. The test of directionality of all anxiety hypotheses revealed that 12 of 15 of the ANOVA's were in the predicted direction ($p > .05$).

These results supported the following findings: (a) athletes who exhibit high competition trait anxiety see less ego threat in sport situations than athletes with low competition trait anxiety; (b) external locus of control athletes do not report more uncertainty anxiety than internal locus of control athletes; (c) external locus of control athletes do not report more ego threat anxiety than internal locus of control athletes; (d) athletes who see their past as being successful do not report more uncertainty anxiety; (e) athletes who perceive their ability as high do not report more anticipation anxiety; (f) those athletes who report their past basketball history as successful perceive a greater internal locus of control than those athletes who view their past as less successful; and (g) athletes who perceive their ability and success as high have low competition anxiety.

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[1] Fisher, A.C. Multidimensional Scaling of Sport Personality Data: An Individual Differences Approach." *Journal of Sport Pshchology*, 1979a, 76-86.

[2] Martens, R. *Sport Competition Anxiety Test.* Champaign: Human Kinetics, 1977.

IMPACT OF SELECTED ACADEMIC CURRICULAR VARIABLES ON ACHIEVEMENT AND GRADUATION OF OPEN ADMISSIONS STUDENTS AT AN URBAN COMMUNITY COLLEGE

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The problem addressed by this study is the high attrition and low rate of degree completion plaguing open admissions students at community colleges today. The study examined alterable academic curricular variables to determine which variables were predictive of the success (graduation) or failure (probation) of open admissions students.

Benjamin S. Bloom's mastery learning model served as a paradigm for curricular analysis. Variables implicit in the model, individualized pacing and sequencing of knowledge, guided the selection of variables studied: 1) sequence of remediation; 2) sequence of difficult courses; and 3) time spent pursuing a degree. The sample consisted of 198 open admissions students enrolled in 1978 at an urban community college. Half had graduated by 1981 and half were on academic probation. Transcripts were examined in data compilation.

Results of the study indicated a statistically significant correlation at the .001 level, between semester of remediation and success. A hierarchical multiple regression analysis revealed that semester of remediation explained 23 percent of the variation in student outcome significant at the .01 level. A significant but low correlation was found between enrollment in difficult courses and student outcome. However, when added to a multiple regression equation, difficulty index did not contribute to predicting success. Similarly, cumulative course load did not add to the predictive equation.

A major implication of this study is that open admissions students, once barred from college, can succeed. Further, certain conditions such as completion of remediation in early semesters will facilitate success. Hence, remediation can be viewed as critical to the university and its students. Although programs such as counseling and advisement were not studied, their impact is implied by these findings. Similarly, the impact of affective variables, such as achievement motivation, subject interest and subject failure on degree completion, is implied.

Major recommendations include: 1) investigations of the impact of supportive services on degree completion of open admissions students; 2) studies of the impact of affective variables on degree completion; and 3) ethnographic studies of several open admissions populations - dropouts, one year persistors, probationary students, and graduates, to determine how the academic variables studied, as well as the affective variables implied impact on student behavior.

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